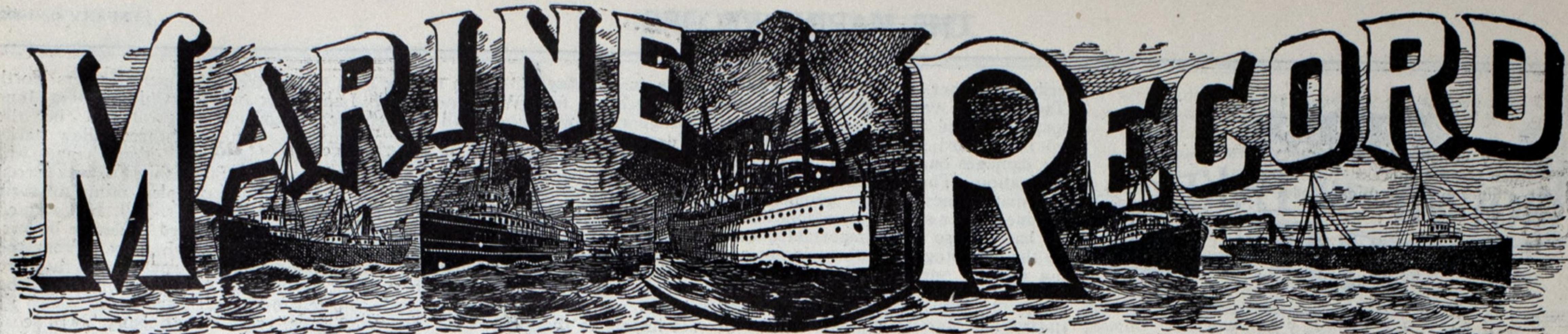


MARINE RECORD



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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

PRESIDENT.

A. B. WOLVIN,
1ST VICE-PRESIDENT.

CAPT. J. G. KEITH,

DULUTH.

Chicago.

OFFICIAL PROTEST.

Members of the Lake Carriers' Association and vesselmen generally, are opposed to the removal of Col. Lydecker, Corps of Engineers, U. S. A., from the position of engineer at Detroit. At a meeting of the executive committee of the carriers, held in Cleveland on Tuesday last, the following resolutions were adopted:

Whereas Col. Lydecker, in his office as engineer in charge of those improvements which are in the through waterways of the lake system, has not only been efficient, and has not only shown the deepest interest in the proper and diligent prosecution of the work, but has been uniformly courteous, and has always been at great pains to accommodate the necessities and the convenience of commerce in doing the work: and,

Whereas large works are now in progress and other work is contemplated in these channels, with which he is perfectly familiar in every detail.

Resolved that it is the sense of this meeting that the interests of the government and of commerce involved in these improvements would be best subserved by keeping in charge an intelligent and efficient officer having this familiarity: and,

Resolved that we respectfully petition the chief of engineers, if it be compatible with the rules and practices of the service, to retain Col. Lydecker at Detroit: and,

Resolved that copies of this resolution be sent by the secretary to the United States Senators most directly representing the districts involved.

LIGHTS AND FOG SIGNALS ON CRIBS.

The question of putting lights and some sort of a fog signal on the cribs off the port of Cleveland will be taken up during the winter. It is said that the committee on aids to navigation of the Lake Carriers' Association will try to persuade the city to take steps in this direction for the protection of the boats entering this harbor. It has come to the point that the government will take no other steps in the matter than to urge the city to fulfill the obligation imposed when the right to construct the cribs in the path of lake commerce was given. The question was brought to the notice of the city officials in the fall and was discussed in a cursory sort of way when other matters demanded the attention of the Lake Carriers' Committee, and has not been agitated much since. It is said that during the winter the matter will be taken up again and some reforms will be worked out that will give the vessel interests the proper sort of protection from collisions with the cribs. Those who have agitated the question call attention to the fact that the suit now pending in the Admiralty Court in Chicago, where the Conestoga ran afoul of a crib off that port and sank, will be a test that will have a strong bearing on the Cleveland situation, and if the suit favors the boat the marine men have little fear of being able to persuade the city to place the proper warning signals on the cribs.

DETROIT SHIPMASTERS PETITION.

The Shipmasters' Association of Detroit, at a special meeting held on Thursday last, indorsed the action of the Lake Carriers' Association in seeking to retain Col. Lydecker, Corps of Engineers, U. S. A., at Detroit, and unanimously passed the following resolution:

"Whereas, the shipmasters of Detroit have heard with regret of the orders removing Col. Lydecker from his present position in connection with widening and improving the ship channels in Detroit and St. Mary's rivers, and

"Whereas no persons are better able to judge and appreciate the success of his efforts to make the channels safe than the men who travel through them daily during the season of navigation, and

"Whereas we have heard of the efforts of the Lake Carriers' Association to retain Col. Lydecker in charge of the work inaugurated by him.

"Resolved that this association heartily indorse the resolution adopted by the Lake Carriers' executive committee at their meeting in Cleveland and join our petition to theirs."

That if not incompatible with the public service Col. Lydecker may be retained at Detroit to finish the work so ably commenced under his direction.

A petition indorsing the position of the Lake Carriers' Association is being circulated and freely signed by Detroit vessel owners, and nothing will be left undone to secure Col. Lydecker's retention in this city.

THE HEAVENS IN JANUARY.

Astronomical data for January, 1902, furnished the MARINE RECORD by the Washburn Observatory:

All the brighter planets are near the sun except Venus, the brilliant evening star, and Venus, too, is fast receding towards that luminary. Saturn and Jupiter are already lost practically in the sun's light. The former is passed by the sun in its annual eastward course on January 9th and the latter on January 15th. Mars, owing to its own greater eastward motion, still holds its place ahead of the sun; but this planet, too, is almost lost to view and sets shortly after the sun at nearly the same position.

Venus attains its greatest brilliancy on January 9th, although only a little over one-quarter of its disk is then illuminated; but on that date the increase due to its approach to the earth ceases to exceed the loss due to the waning of the visible disk.

The times of sunrise and sunset at Milwaukee for the month are as follows:

	SUNRISE.	SUNSET.
January 1.....	7:24	4:27
January 11.....	7:23	4:37
January 21.....	7:18	4:49
January 31.....	7:09	5:02

The times of the moon's phases are:

Third quarter.....	January 1.....	10:08 a. m.
New moon.....	January 9.....	6:15 p. m.
First quarter.....	January 17.....	12:38 a. m.
Full moon.....	January 23.....	6:06 p. m.
Third quarter.....	January 31.....	7:09 p. m.

The principal fixed stars visible during the month are: In the evening hours, near the meridian; Capella and Aldebaran; to the east, Castor and Pollux, Sirius, Procyon and the bright stars of the constellation, Orion.

NATIONAL TAX NOT POPULAR.

The proposition which came up from some Wisconsin point to establish a national tax on vessels will not be very popular with the vessel interests, and it is likely to prove unpopular with the municipalities along the chain of lakes. In fact, it is said that any such movement coming up in Congress will be strongly combatted by the marine men generally. The plan has not been outlined in detail, but the essential features have become known. The Wisconsin man who suggested the scheme thought that all the revenue derived from boat property should go to the national treasury, inasmuch as the government maintains the channels through which the boats pass. The vesselmen do not feel kindly toward the movement, because this would leave them no selection in the port of hail, and all tonnage would be subject to an arbitrary tax, whereas it is now customary to have a boat hail from some port where the taxes are reduced to the minimum, which they admit is the reason why Cleveland, Chicago, Milwaukee, and Buffalo have so few boats enrolled. Those who have made a close study of the situation say that the laws governing the enrollment of boats ought to be amended, but say that the task which the reformer sets himself to do will be a very hard one.

BRITISH SHIPBUILDING.

From a summary of the shipbuilding returns of the United Kingdom for the present year it is learned that last year Messrs. Wm. Gray & Co. headed the list with a total of 24 steamers, aggregating 74,191 tons gross; Messrs. Harland & Wolff being second with six vessels, totalling 67,845 tons gross. This year the positions are reversed, Messrs. Harland & Wolff holding the premier position, having built eight ships with the huge total of 92,316 tons; Messrs. Gray making a good second with twenty-six vessels with an aggregate tonnage of 82,262 tons.

The following figures show the amount of merchant and war tonnage put into the water from British yards during this year—with the exception of those vessels launched by Messrs. R. Craggs & Sons, whose return has not been made public up to date—as compared with the preceding years, the present years' total being a record:

Launched in 1901, 860 vessels of 1,697,240 tons gross.
Launched in 1900, 717 vessels of 1,505,605 tons gross.
Launched in 1899, 755 vessels of 1,518,481 tons gross.
Launched in 1898, 794 vessels of 1,488,130 tons gross.



CHICAGO.

Special Correspondence to The Marine Record:

The Crosby Transportation Co. accedes to the demands of the Longshoremen and winter's wages are placed at 20 cents per hour. The dockmen organized a union 150 strong.

Mr. R. J. Dunham has severed his connection with the firm of Messrs. E. W. Elphicke & Co., and has concluded to "paddle his own canoe" in the future. "Robbie," like his sire, has always been well liked and his personal business success would appear to be assured. R. J. will now be found at 2-4 Sherman street in the vessel agency and marine insurance business.

The following meteorological observations are furnished by the office of the United States Weather Bureau, Chicago, for the week ending January 8: Prevailing wind directions for the week, southwest; highest velocity, 38 miles from the south on January 2; mean temperature for the week, 29 degrees; highest temperature, 40 degrees on the 2nd; lowest, 9 degrees on the 3rd.

At the annual meeting held Saturday by the local lodge the Marine Engineers' Beneficial Association elected the following officers: president, H. T. Macauley; vice president, G. L. Allen; recording secretary, Arthur Hyde; corresponding secretary, George Averill; treasurer, William H. Kennedy; trustees, Chris Castle, H. T. Macauley, Evan Jenkins; delegates to the national convention, Evan Jenkins, H. T. Macauley.

After the steamer Brazil had been loaded with a cargo of wheat at the Armour elevator in the north branch the vessel went aground five hundred feet from the elevator, and there she remained for two weeks. As the Brazil was under contract to go to the south branch to discharge her cargo and could not possibly get over the Washington street tunnel without lightering, there was serious conflict between shippers and the owners of the steamer relative to the lighterage charges, detention, etc.

At the annual meeting of the Chicago lodge of the Shipmasters' Association the report of the officers showed that five members of the 128 died during the past year. Arrangements were made for the annual reception and ball, which will be held February 4. Officers were elected as follows: President, W. D. Hamilton; first vice president, D. A. Curran; second vice president, A. Gallagher; treasurer, W. W. Shaw; secretary, F. R. Higgin; delegate to the Grand Lodge, W. D. Hamilton; alternate, A. Gallagher.

Shipmasters' Lodge, No. 5, of Milwaukee, elected officers for the ensuing year last Tuesday evening as follows: President, Henry Leisk; first vice president, Frank Van Patton; second vice president, Peter Anderson; treasurer, John McCoy; secretary, John J. McSweeney; trustees, John Cochrane, Capt. C. H. Davis, and James Leisk; delegates to the national convention to be held in Washington next week, Henry Leisk and Daniel Sullivan. The installation of officers will take place at 2 o'clock next Tuesday afternoon.

Shipkeepers on board vessels in winter quarters here are having great trouble with the officers of the drainage board in regard to polluting the Chicago river. A number have been arrested and hauled before the police court for dumping refuse of their cooking into the river. Vesselmen say it is hard on the shipkeepers, for they must get rid of the garbage somehow. Officers are constantly on the watch for even a stray cabbage leaf on the surface of the river. More care is being taken of the purity of the Chicago river just now than was ever dreamed of a few years ago.

The Chicago river is to be widened to a 200-foot channel between Lake and Van Buren streets. A strip of land varying from fifteen to sixteen feet is to be condemned on the west bank of the stream. The long disputed question of which side of the river would be cut away was finally settled yesterday by official action of the board of sanitary trustees. The approximate cost of this long desired improvement will be \$1,500,000. The Pennsylvania Railroad Co. will be one of the greatest sufferers. The property of the corporation fronts the dock line south of Madison street, and the company's freight houses, terminal facilities and right of way will be seriously interfered with. South of Lake street, the Western Cold Storage Co., the Star and Crescent Milling Co., and other concerns will be severely handicapped. Suits for consequential as well as property damages may amount into hundreds of thousands of dollars. These have been taken into account, however, in the estimated cost mentioned.

The case of the steamer Conestoga against the City of Chicago for damages amounting to \$67,034 on account of that steamer being sunk by collision with a water works

crib November 16, 1899, will be tried early in January. Two cases of vessel owners against the drainage board for losses suffered in the south branch of Chicago river will go far toward settling the liability of the drainage board for damages on account of the current and obstructions to navigation. The United States courts in Chicago have had many times a larger number of cases in admiralty," a marine lawyer said, "but seldom has it come that one winter has seen so many important questions bunched as now. In the Conestoga case there is not a city around the lakes not directly interested, for the rights of municipalities to maintain cribs in navigable waters is to some extent at stake. In the drainage canal cases the issues are practically new, but the findings will be of vast import to the marine interests as well as the commerce of the city. The storm signal case is of national import. A good share of the suits will probably go to the Court of Appeals before they are finished.

There is a case in the admiralty court soon to be tried which will be of much importance, not only among marine men but in the business world generally, as it concerns contracts over long distance telephones. The general adoption of long distance telephones for chartering purposes on the lakes will cause vesselmen to watch the case with deep interest. Last spring the steamer Pewaukee was chartered by Chamberlain & Co., of Chicago, from Leatham & Smith, of Sturgeon Bay, Wis., all the talk being over the long distance telephone. Differences arose and Leatham & Smith refused to recognize the contract on the ground that it had not been consummated. The Chicago firm sues for \$5,000 for breach of contract. Still another case of interest will be that of Soren Termansen, the owner of a scow at Manitowoc, against the schooner Jesse L. Boyce, for \$500 damages. The Boyce was lying at a dock at Manitowoc last fall, and Capt. Ole Christenson wanted to change her position. The scow was in the way, and Capt. Christenson moved it. In the night a storm came up and several holes were knocked in the scow's side. Charles E. Kremer, the admiralty lawyer, representing the Boyce, held that the Captain himself and not the schooner, was liable if damage resulted. Vessels could not be responsible for the whims of captains who started moving other people's property. Some interesting points will also come out of this suit.

BUFFALO.

Special Correspondence to The Marine Record:

Mr. Edward Gaskin, 706 Ellicott Square, has been appointed surveyor at this port for the British Corporation Registry of Shipping, also Oliver P. St. John for Toronto.

Contrary to general expectation nothing will be done toward compelling the elevator companies at Buffalo to reimburse vessel owners on account of the delays to the vessels since the close of the season of navigation.

The following officers have been elected for the ensuing year by the L. T. P. A. No. 4, of Buffalo: President, A. H. Vroman; vice president, W. E. Bradley; financial secretary and treasurer, A. G. Gilbert; corresponding and recording secretary, William G. Fox; trustee, L. P. Cole; delegates to grand lodge, Capt. Charles Nash, John O'Connor, John Doyle.

At the annual meeting of the Lake Carriers' Association, C. H. Keefe, Esq., who has been secretary of the association since its organization, will resign the position. Harvey L. Brown, Esq., of Buffalo, a rising young attorney, is a candidate for the place, and will receive a large support. Mr. Brown is a son of Captain J. J. H. Brown, a former president of the association, and a prominent vessel owner of Buffalo.

On Saturday night the big barge Bryn Mawr, which is tied up at the Wells' elevator suffered an accident, and but for the vigilance of the watch, serious results might have followed. Owing to the bursting of a seacock considerable water was shipped, but syphons were soon at work, and the leak was kept under control. Men were engaged on Sunday in repairing the break. The barge is unloaded and is booked for the drydock.

It will probably require this week to clean up the grain cargoes still remaining in vessels and to be unloaded. The steamer Coralia finished at the Northern and the Nimick took her place. There is still considerable towing being done and the six tugs yet in commission are kept pretty busy during the day. No work is attempted at night. Captain C. St. Clair, of Cleveland, general manager of the Great Lakes Towing Co., has been in Buffalo for the past few days looking over the company's property in this port and giving instructions to the local staff.

The November term of the United States district court reconvened in the federal building this week after an adjournment from December 17. The damage suit brought by Andrew Boehringer against the owners of the steamer Troy, occupied the remainder of the first session. Boehringer is suing for \$10,000 damages for the loss of a leg while the boat was entering the harbor at Duluth on July 13. He was a deck hand and was ordered to throw the line to the wharf. His leg became entangled in the rope and was pulled through the hole through which the rope passes and was literally pulled from his body. Boehringer is a man who demonstrates the truth of the statement that one can feel pain in a leg after it has been severed from his body. Not infrequently he will cry out that his leg pains him and reach down and rub the spot. He thinks that if the leg were grappled for and then given a burial he would feel no more pain.

When the big twin screw steel passenger steamers North West and North Land start out for Chicago next June they will scarcely be recognized, so great will be the change in their appearance. Instead of three yellow stacks there will be but two stacks, and many other changes will have been made. The Northern Steamship Co. was forced to overhaul the boats owing to the complete failure of their boilers. When these boats were built Mr. J. J. Hill wanted the best in the world, and so he ordered Belleville boilers, the same as were used in the French navy. From the first trip these French boilers caused trouble, and they are now to be thrown out on the dock. In their places will be installed in each ship ten ordinary Scotch boilers, such as are used on most lake craft. The change will cost \$175,000. It is expected that the new boilers will furnish steam for 8,000-horse power, and the boats will have their speed increased several miles an hour. In general appearance the boats will resemble the St. Paul and St. Louis of the American line.

An important admiralty case, in which Cleveland parties are interested on both sides, is being heard here. George Stone and others in the United States district court, began suit this week, in admiralty, to recover damages amounting to \$30,000 from the Wilson Transportation Co., as owner of the steamer Yuma of that line. The suit is the outgrowth of a collision between the Yuma and the barge John Martin of the Bradley fleet, which occurred at the head of the St. Clair river in the fall of 1900. The Martin, which was in the tow of the steamer M. B. Grover, was sunk in the collision and three men were drowned. Mr. Stone and his colleagues are represented at the trial by Harvey D. Goulder Esq., of Cleveland, who is, perhaps, one of the foremost admiralty lawyers in the country. The defense is in the hands of John C. Shaw, Esq., of Detroit, who also ranks high in that branch of the legal profession. Capt. Edward Mooney, master of the Grover, was the first witness called to the stand. He told of the accident and gave a description of the river, the rate of speed both boats were traveling when they collided and the condition of the weather. Several other witnesses were called for the prosecution. The case will likely last all week. Capt. James Lawless, of Vermillion, master of the John Martin, was lost with the vessel.

The council of the marine section of the International Longshoremen's Association, representing all the dock-workers' unions in Buffalo, held a meeting last Thursday which was followed by a banquet at Almendinger's. The guests of honor were President Daniel J. Keefe of the International Longshoremen's Association and Ben Tillett of London, Great Britain's delegate to the American Federation of Labor. The marine section includes eleven unions, the grain handlers, ore handlers, coal handlers, stationary firemen, marine firemen, lumber handlers, car handlers, car pinchers, outside and inside freight handlers. The council consists of fifty-five representatives from the unions. The meeting was attended by practically the entire council. Mr. Keefe received a rousing welcome when he arose to speak. He went straight to the center of local conditions and talked plainly and frankly. He pointed out the betterment in the conditions of the men in the last two years. He referred to their fight to throw off the contract system and he was greeted with tremendous applause when he referred to the unwillingness of the men to have it saddled on them again where they had once thrown it off. "Do not trust to others to do for you what you can do yourselves," said Mr. Keefe amid enthusiastic cheers. "Keep your eye on the other fellow." John Coleman spoke along the same lines, approving what Mr. Keefe had said. "Somebody may come along and say it is best for somebody to have the contract," said Mr. Coleman. "You know what is best and it is not wise for any committee to make such a dicker for the dockhandlers as they do not want. I hope you take the hint that has been given you by Mr. Keefe tonight." The old abuse ridden contract system, with its iniquities and hardships, had not a friend in the meeting. The members of the council knew how the superintendent system has worked for the last two years between the Lake Carriers' Association through Supt. Thomas T. Kennedy and the grain shovelers through Local No. 109, I. L. A. When the Lake Carriers' Association holds its annual meeting in Detroit it probably will find the grain shovelers representatives more solid than ever before against the contract system and in favor of the better methods that have been in use since the contractors were turned down and out. Inasmuch as there had been some talk that efforts might be made to persuade the Lake Carriers' Association to install again the old system of contractors and abuses, the attitude of the men and of the entire marine section last night was significant.

Green Bay, Wis., comes forward with a proposition for a twenty-foot channel, and the Wisconsin delegation in Congress will undertake to secure the required appropriation for widening the channel. The Green Bay water route will become an important one in time. Shipments of grain from Southern Minnesota and South Dakota are sent to the Atlantic via Green Bay, which is much nearer than the Chicago and Superior routes. Another advantage is that the return steamers take coal via Green Bay for the territory naturally tributary to that port. The River and Harbor Committee of the House will commence to give hearings about the 10th of this month. The failure of the last Congress to pass a bill has added much to the work of the committee, and it will be a busy organization from now on.

DETROIT.*Special Correspondence to The Marine Record:*

The annual meeting of the national body of the Marine Engineers' Beneficial Association will be held in Washington about the middle of January. A number of delegates from the lake local associations will be sent to attend the conference. Many lake questions are to come up and, in fact, from the present aspect of affairs, it will be a lake dominated meeting.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Detroit, for the week ending January 7th: Prevailing wind directions for the week, southwest; highest velocity, 36 west at 2:20 p. m. on the 2nd; mean temperature for the week, 26 degrees; highest temperature 40 degrees on the 2d; lowest 10 degrees on the 3d.

The Detroit Harbor of the Masters' and Pilots' Association elected the following officers: Capt. B. F. Ogden, captain; Capt. Ed E. Blair, first pilot; Capt. Thomas McDougall, captain's clerk; Capt. H. C. McCallum, purser. Capt. McCallum was elected as delegate to the grand harbor, to be held in Washington, and Capt. William Wilson was elected alternate.

The ninth annual social event of the Detroit Shipmasters' Association, will be given Wednesday evening, January 15, at the Masonic Temple. The elaborate preparations the captains are making for the entertainment of their friends would indicate that the affair will be one of the most successful in the history of the association. Zickel's and Finney's orchestras will furnish music for dancing. Capt. Alex. McKay, ex-president of the association, is chairman of the reception committee, which includes 102 lake captains.

President Newman and General Manager Sinclair, of the tug trust, were here yesterday looking over the wreckers Saginaw and Favorite, and it is probable that within a short time they will both become the property of the trust. The trust now owns the wrecker Wales, and if the other two boats are acquired the trust will have a practical monopoly on all the wreckers of any size on the lakes. The Favorite is the most complete wrecker on the lakes, and the trust syndicate had an option on her some time ago, and although this has expired, the offer still stands, and will probably be accepted.

Steamboat inspectors J. P. Cottrell and John H. Galwey have completed their investigation into the collision of the steamer J. J. Albright and the tug Samuel Christian, near the head of Grosse Isle, and their judgment in the case is that there was no violation of the rules of navigation on the part of Captain Myron Parsons, master of the Albright. This completely exonerates Parsons from all blame for the collision in which Capt. Harlow, fireman Bremmer, and an unknown cook of the tug lost their lives, and virtually places the blame for the accident on the crew of the tug, who, it was alleged, attempted to cross the Albright's bows.

At the annual meeting and election of officers of the Detroit Shipmasters' Association held on Thursday last, Capt. William Roach was selected as president of the organization. The matter of the Masters' Protective Association was not considered. The following officers were elected: President, William Roach; first vice president, William Crosby; second vice president, William McClean; treasurer, Tim LeMay; secretary, George A. Sims; warden, John McAlpine; sentinel, Thomas J. Carney. President Roach was selected as delegate to the national convention next month, and Murray L. Millen was chosen as alternate. The election of Capt. Roach as president is considered a victory for the younger men in Local No. 7, although his election to succeed Capt. A. J. McKay, who held the chair for a number of terms, was almost unanimous.

From the latest reports that I can gather, the Lumber Carriers Transit Co. is not likely to amount to anything. Lumber shippers or consignees now own their own tonnage, they won't enter the combination or be dictated to regarding freight rates, consequently other owners must accept the terms offered by those who have the stuff to ship, so that a syndicate of lumber carriers is said to be very improbable. On the other hand a prominent owner and dealer said that as far as he was concerned the trust would be a good thing for the dealer who owned tonnage with which he carried his own stock, and that while rates were maintained and probably made higher than heretofore, the cost of operating the boats would not be greater and he, therefore, would have his lumber carried the same as before, while his competitors, who did not own tonnage will have to pay higher rates.

The H. W. Williams Transportation Co. lost in the Supreme Court at Lansing, Mich., its suit against the Darius Cole Transportation Co., of Detroit, growing out of the sale of the steamer Darius Cole to the complainant to be used on the line between South Haven and Chicago. The purchase was made in September, 1899, for \$125,000, a portion of which was paid down and the remainder secured by a mortgage on the vessel. It was claimed that the vessel could not make the speed guaranteed by the company making the sale, but the use of the boat was continued up to August 30, 1900, when the Williams Co., tendered the boat back to the defendant and filed a bill to have the contract rescinded, the mortgage canceled, and to recover

the money paid. The lower court entered a decree for the complainant, but the Supreme Court has reversed the decision and dismissed the bill without prejudice. The court says that the case presents a question which is for the first time presented to this court squarely for decision, whether a contract of sale, accompanied by a warranty of quality gives the purchaser the right to rescind for a breach of warranty. In this case there was no claim of fraud, and the Supreme Court finds the logical rule to be that the complainant had not the right to rescind the contract when the attempt to do so was made.

The D. & C. Navigation Co. are preparing to give the Barrys a run for the business if they decide to operate their steamers on Lake Erie. It was announced by the officers of the Detroit & Cleveland Navigation Co., at Detroit a few days ago, that if the Barry Bros. of Chicago decide to place their steamers Empire State and Badger State upon the route between Detroit and Cleveland in opposition to the existing line, there will be a fight to the finish and no quarter given. "If the Barry line comes into the Lake Erie business we will fight them to a finish and there will be no buying out of boats or anything of that kind, you can rest assured," said an official of the D. & C. line. "When the Grummond line attempted the same several years ago it took us two years of hard fighting to knock them out, but it was successfully accomplished and the same will be the case should the Barry line come into the field. We look upon the talk of the Barrys as in keeping with their guerilla practices on Lake Michigan, but they will find that it is a different proposition here. If they are coming over in the hope and expectation that we will buy their boats and business in order to rid ourselves of the competition, they will be greatly mistaken. There is an impression in some circles that the D. & C. line bought the old State of Michigan when Grummond operated her between Detroit and Cleveland, but that is a mistake. This company never bought any outside boats and will not do so. Furthermore, we will not establish a differential with the Barry line if it is established. It will be a clean fight and we will stick to it to the end."

CLEVELAND.

The local managers of the Great Lakes Towing Co. will meet here Monday, January 20.

Messrs. Long & Murphy, Machine and Boiler Co., 120-6 Elm street, are manufacturers of all kinds of coal and ore buckets and are enjoying an excellent patronage in their specialties.

Messrs. Burton & Kennedy, engineers and machinists, Main and Center streets, make a specialty of pumps and marine work. They are meeting with a fair share of orders and work is booked ahead. The merits of the Burton pump are widely known and recognized.

Fred Harmon and Alonzo Arnold are up against the local lodge of the M. E. B. A. and are likely to be expelled at the next meeting for fitting out the boats of their fleet last spring. Harmon was chief in the Wilson Transit Co. and Arnold was chief of the Pickands Mather fleet. The M. E. B. A. president is likely to be in attendance at the meeting.

Considerable has been said of late of a possible getting together of the masters of lake steamers into a stronger protective organization. It is now known that the men are restless, and want to form some sort of an organization or association to better safeguard their interests. The American Association of Masters and Pilots of Steam Vessels are enrolling new members hand over fist.

The annual meeting of the Lake Carriers' Association will be called on Wednesday, January 15. Secretary Keep said that President Wolvin favored that date and has arranged his business so that he can attend the meeting. The meeting will be held at the Cadillac hotel and it is expected it will last three days. The meeting of the owners of lumber carrying vessels will be held about the same time.

Cards announcing that Mr. Silas Hitchcock has been admitted to the firm of M. A. Hanna & Co., have been sent out by that firm. Mr. Hitchcock has been with M. A. Hanna & Co. for a number of years. He has charge of the transportation end of the business and does all the chartering of ore tonnage. Mr. Hitchcock is one of the most valuable and best liked business men in the city, or, at least, as known in marine circles.

Edwin S. Mills, the assistant general manager of the Pittsburg Steamship Co., who has been in the hospital for the last four months, has been removed to his mother's home at Willoughby and is now improving rapidly. It is expected that he will be able to travel by February 7, when he will go to California, where he will spend a few months to regain his strength. His improvement of late has been very gratifying to his friends.

Capt. W. A. Collier, until this fall general manager of the Great Lakes Towing Co., has entered insurance business in this city. Captain Collier was a tugman on the river for a number of years, advancing from a tug master to the management of the Vessel Owners' Towing Co., which he practically organized. Capt. Collier has the widest possible marine acquaintance and he will certainly prove an invaluable agent if his insurance business runs on marine lines.

The annual ball of the Shipmasters' Association will be held in the assembly room of the Chamber of Commerce

on Wednesday evening, January 15. The committee which has the matter in charge is now at work upon plans more elaborate than anything presented recently. It is expected that the crowd will be larger this year than it has been in the history of the organization, as masters from all along the south shore have signified their intention to come to this city to attend the ball.

The Macbeth Iron Co., 57 West Center street, machinists, iron, brass, and steel castings, etc., is composed of well known competent and energetic young men. Mr. L. S. Dickey was the foundry superintendent and C. J. Snow cashier for the Cleveland Ship Building Co., from about the starting of that industry up to a few months ago, or for a period of fourteen years. C. W. Kelley and John G. Messer, vice president and superintendent respectively, are equally well known in trade circles.

The Burroughs, Capt. Jones, bucked ice for a couple of winters and always reached the crib with supplies. Mayor Tom Johnson in his mightiness or some of his chiefs, discarded the Burroughs and her ice fighting master, since which time fire boats and tug boats can't wallop through the hummocks of ice even when men at the cribs are in distress. Capt. Jones generally got there on all occasions and the mayor would do well to start him at it again, charges of course being equal and service competent as formerly.

The steamship companies controlled by Capt. John Mitchell held their annual meeting yesterday afternoon at Mentor, which is the port of call of all the boats owned by those concerns. The organizations are the Cleveland, the Etna, and the Mentor Steamship Companies. The election resulted in a choice of the same board of directors as those of last year, and also of the selection of the same officers as those who ruled last year. They were: president and general manager, Captain John Mitchell; treasurer, Captain Alfred Mitchell; secretary, J. F. Wedow.

It is now proposed to change the by-laws of the Lake Carriers' Association that the president may be eligible to re-election. This change will be suggested to the meeting which will be held in Detroit next week. If this carries it will become immediately operative, and therefore make it possible that A. B. Wolvin or an ex-president may be returned to the presidential chair of the association. The desire to re-elect Capt. Wolvin is quite general. Some talk has been going of a Cleveland man for the post, and Capt. John Mitchell was mentioned as a possibility. J. C. Gilchrist has been frequently spoken of lately.

Mr. Nicholas J. Boylan has resigned his position as manager of the fuel department with the Pittsburg Coal Co. to accept a similar place with the National Fuel & Dock Co. Mr. Boylan is one of the oldest fuel men on the lakes and is very popular with the masters. Old timers say that "Nick" has been on the river for upwards of forty years, but he claims he has only been in the business twenty-two years. He was with the Ohio & Pennsylvania Coal Co. for eighteen years and had charge of the fuel department of the Pittsburg & Chicago Gas Coal Co. for two years. When the last named company was bought by the Pittsburg Coal Co. he went with the trust.

An important meeting of the Marine Engineers' Beneficial Association will be held in Cleveland on Friday, at which all the large lodges will be represented. National President George H. Uhler, of Philadelphia, is expected to be present. A schedule of wages will no doubt be adopted and the general opinion is that the rates agreed upon will be about the same as the figures in the Pittsburg Steamship Co.'s contract. The local engineers that signed for next year with the trust are not making any effort to hide it, and the officials of the steamship company are confident that the men will live up to their contracts. There has been some talk of dropping the members that signed, but it is not likely that such action will be taken, as it would mean the loss of about 150 men to the association.

As to the prices at which the ore is to be carried down the lakes, the vessel men as well as shippers are expecting that last year's season rates will prevail. The steel corporation fixed the prices a year ago and shows a tendency to do the same this season. At least with more ore to handle than it had last year, it will be a greater factor than ever, and consequently will not care to have others not so largely interested make the rates by which it must abide. On the other hand, the rate was low for the smaller class of carriers and the detention experienced at loading and discharging ports brought earnings down to almost an invaluable investment. To prove this one large owner has only declared a 4½ per cent. earnings, and another but 5 per cent., which considering the property risk, shows very indifferent earnings.

Geo. H. Worthington, of the joint committee of the Cleveland Yacht Club and the Cleveland Chamber of Commerce, appointed to endeavor to get the proposed naval training ship located at Cleveland, says that he is hopeful that this will be done. He says that Secretary of State Hay is favorable to the location of the training ship in Cleveland and that the officials of the Navy Department are thought to be also favorably disposed toward the plan. "I know that the Navy Department is planning the establishment of a training ship on the lakes," said Mr. Worthington yesterday, "and as Cleveland seems to be the only city that is making an effort to get the vessel I see no reason to fear the result. Congress is to be asked for an appropriation for a training ship on the lakes and I understand that the chairman of the Congressional committee is favorable to the plan."

AMERICAN SHIPPING.

Along with the talk from every quarter concerning the expansion of American trade with foreign countries comes the demand that in some way, by some means, the carrying of American productions shall be done by an American merchant marine. At the present time 91 per cent. of the imports and exports of the United States is carried in ships belonging to foreigners. Outside of harbor and license charges, every cent of the enormous freight money paid in a year by Americans goes toward the enrichment of people belonging to other nations and spending their earnings in other countries.

The United States has made no progress in shipping tonnage since 1861. After a lapse of forty years the aggregate tonnage of the shipping of this country is almost exactly the same as at the beginning of the civil war. In the list of nations the United States stands third with shipping tonnage, following after Great Britain and Germany, but this position is not to be proudly held when American facilities are considered. Great Britain now has registered 14,809,000 tons, Germany 2,966,000, United States, 2,766,000. Although but a little way behind Germany, the total is not at all inspiring.

Here is a country greater in area than the two leaders, richer in developed and latent wealth than any commercial competitor, with an illimitable store of iron and timber for ship building purposes and the ability of artisans to construct, yet year after year paying enormous sums for transportation into the treasures of other lands.

It is like a great mercantile house doing business in many directions in competition with other lively sellers of goods. The house is gradually gaining ascendency in amount of goods sold and is far ahead in selling methods, yet its transportation facilities are weak and it is paying drayage charges to men who belong to other houses. From its profits is constantly making a drain which should be applied for the upbuilding of a carrying system of its own.

Few merchants would consider themselves in good business shape if they paid competitors for delivering their goods and few business men would consider that the United States is doing a shrewd business when it allows its ocean traffic to be constantly done by foreign ship.

The question of cheaper rates centers very largely into present arguments. If the foreigners will carry for less than Americans, let them carry. If American shipping is not built because foreigners are cheap carriers it is obvious that the foreigners will never have competition. This idea cannot help but fall before a reasonable national shipping measure.

Congress will be troubled and bothered by freak shipping bills—it already has been, but out of it all will inevitably come something which will give an impetus to the dragging and uncertain work of American merchant ship building for foreign trade.—Exchange.

THAT DREDGING COMBINE.

Relative to the much-talked-of combination of dredging interests on the lakes, E. J. Hingston, the well-known contractor, of Buffalo, said:

"A meeting was held by the dredge owners and the promoters of the proposed trust in Chicago during the latter part of November but no final action was taken. The plan of organization was discussed and the dredge owners were asked to think the matter over and send in, at the next meeting, any suggestions which they might have."

Two expert appraisers and two expert accountants have been sent through the lakes to ascertain the value of the plants owned by the various dredging concerns."

Mr. Hingston stated that the plan of organization provided for a capitalization of \$5,000,000 and a bond issue for a similar amount.

The lake dredge trust, when, and if, successfully established, will absorb the following plants: Lydon & Drews Co., Chicago, eight dredges and eight tugs; Hausler & Lutz, Chicago, four dredges and three tugs; Fitzsimmons & Connell Co., Chicago, three dredges and four tugs; Starke Dredge Co., Milwaukee, eight dredges and eight tugs; Hickler Bros., Sault Ste. Marie, two dredges and three tugs; H. W. Hubbell & Co., Sault Ste. Marie, two dredges and two tugs; Edwards Bros., Sault Ste. Marie, two dredges and two tugs; James Prvor, Houghton, two dredges and two tugs; C. S. Barker, West Superior, six dredges and six tugs; Williams & Son, Duluth, five dredges and five tugs; Dunbar & Sullivan, Detroit, four dredges and five tugs; Breyman Bros., Toledo, three dredges and four tugs; Jas. Rooney, Toledo, two dredges and three tugs; L. P. & J. A. Smith, Cleveland, six dredges and six tugs; W. A. McGillis & Co., Cleveland, three dredges and three tugs; Hingston & Woods, Buffalo, nine dredges and seven tugs; Buffalo Dredging Co., four dredges and four tugs; Donnelly Co., Buffalo, three dredges and two tugs.

MARINE PATENTS ISSUED.

689,914. Pump and valve for ships, or other closets. E. P. Sands & J. Corcoran, New York, N. Y. Said Corcoran, assignor to said Sands.

689,979. Caisson for repairing vessels and submerged surfaces. David Mason, New York, N. Y.

690,032. Side light and window for ships. G. C. Ralston, Lewisham, England, assignor to J. Stone & Co., Deptford, England.

690,267. Means for propelling vessels. R. F. Gillin, Brooklyn N. Y.

MONTHLY SHIPBUILDING RETURNS.

TREASURY DEPARTMENT, OFFICE OF THE COMMISSIONER OF NAVIGATION, December 31, 1901.

The Bureau of Navigation reports 82 vessels of 19,032 gross tons were built in the United States and officially numbered during the month of December, 1901, as follows:

	WOOD.				STEEL.				TOTAL.	
	SAIL.		STEAM.		SAIL.		STEAM.			
	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.
Atlantic and Gulf.....	40	8,510	18	1,089					2	8,062
Porto Rico.....	1	27							1	27
Pacific.....	2	744	5	109					7	853
Great Lakes.....										
Western Rivers.....			14	491					14	491
Total.....	43	9,281	37	1,689					2	8,062
									82	19,032

The largest steel steam vessel included in these figures are the Pathfinder, 2,792 gross tons, built at Wilmington, Del., N. Y. & Porto Rico S. S. Co., owners; Minnetonka, 5,270 gross tons, built at Cleveland, O., American Shipbuilding Co., owners.

QUARTERLY SHIPBUILDING RETURNS.

The Bureau of Navigation reports 324 sail and steam vessels of 85,678 gross tons built in the United States and officially numbered during the quarter ended December 31, 1901, as follows:

	WOOD.				STEEL.				TOTAL.	
	SAIL.		STEAM.		SAIL.		STEAM.			
	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.
Atlantic and Gulf.....	170	21,967	60	3,535	1	3,374	10	15,313	241	44,189
Porto Rico.....	1	27							1	27
Pacific.....	11	6,158	16	1,386					27	7,544
Great Lakes.....			6	307			8	31,510	14	31,817
Western Rivers.....			41	2,101					41	2,101
Total.....	182	28,152	123	7,329	1	3,374	18	46,823	324	85,678

During the corresponding quarter ended December 31, 1900, 260 sail and steam vessels of 90,439 gross tons were built in the United States and officially numbered, as follows:

	WOOD.				STEEL.				TOTAL.	
	SAIL.		STEAM.		SAIL.		STEAM.			
	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.
Atlantic and Gulf.....										
Porto Rico.....									169	66,572
Pacific.....									28	10,478
Great Lakes.....									14	11,049
Western Rivers.....									49	2,340
Total.....	159	32,945	75	4,880	3	5,532	23	47,082	260	90,439

SIX MONTHS SHIPBUILDING RETURNS.

The Bureau of Navigation reports 717 sail and steam vessels of 154,073 gross tons built in the United States and officially numbered during the six months ended December 31, 1901, as follows:

	WOOD.				STEEL.				TOTAL.	
	SAIL.		STEAM.		SAIL.		STEAM.			
	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.	No.	Gross.
Atlantic and Gulf.....	344	39,723	134	10,204	2	3,609	22	30,811	502	84,347
Porto Rico.....	2	34							2	34
Pacific.....	25	14,430	32	3,781					57	18,211
Great Lakes.....	5	144	42	1,956			16	43,750	63	45,855
Western Rivers.....	6	114	85	5,469			2	43	93	5,626
Total.....	382	54,450	293	21,410	2	3,609	40	74,604	717	154,073

During the corresponding six months ended December 31, 1900, 568 sail and steam vessels of 179,229 gross tons were built in the United States and officially numbered, as follows:

	WOOD				STEEL				TOTAL	
	SAIL.		STEAM.							

WORKING LOADS FOR MANILA ROPE.

By C. W. HUNT.

The technical reference books in use by engineers do not contain definite information in relation to the proper working loads for manila rope, when used in tackle blocks or for cargo hoisting. The hoisting of heavy weights is an important branch of erecting work, and I desire to record in the proceedings of the society a statement of the result of an extended experience, together with some examples of the life of a rope in actual service, which will be a guide to engineers in judging what service can reasonably be expected in similar cases.

The ultimate strength is materially affected by the age and condition of the rope in active service, and also it is said to be a fact that rope is weaker when it is wet. Trautwine states that a few months of exposed work weakens rope 20 to 50 per cent. The ultimate strength of a new rope is the result of tests made by the company with which I am connected of full-sized specimens of manila rope, purchased in the open market, and made by three independent rope walks. The results were given in a paper printed in volume 12, page 230, of the Transactions of this society. Prof. B. Kirsch, of the Imperial Royal Technological Industrial Museum, in Vienna, has since broken over two hundred specimens of rope, mostly 35 mm. (1 1/8 ins.) and 55 mm. (2 1/8 ins.) diameter, and his results agree within 5 per cent. with these figures. Professor Kirsch demonstrated that within the limits of commercial sizes of hoisting rope, the full strength could be obtained for larger as well as for smaller sizes. When the strength falls off, the rope is imperfectly laid, or made on a machine too weak for the work. The ultimate strength of a rope is, in this class of work, useful for one purpose only; that is, to estimate the factor of safety with any given stress. The strength given is for ordinary commercial rope, which may be greatly exceeded in strength by rope made of selected materials.

The proper diameter of pulley-block sheaves for different classes of work is a compromise of the various factors affecting the case. An increase in the diameter of sheave will materially increase the life of the rope. The advantage, however, is gained by increased difficulty of installation, a clumsiness in handling, and an increase in first cost. The Pennsylvania Railroad Co. use 1 1/2 inch rope, running over 14-inch diameter sheaves for hoisting freight on all their lighters in New York harbor, and handle on a single part of the rope loads up to 3,000 pounds as a maximum. Greater weights are handled on a six-part tackle.

Robert Grimshaw, 1893, in collaboration with Lieut. J. A. Bell, of the Equipment Bureau, U. S. N., made a series of tests at the Brooklyn Navy Yard on sheaves of various diameters and with various loads. "The rope was ordinary manila, 3 strand, 3 1/4 ins. in circumference, such as is used in the United States Navy. It was dry, and tested on a 'cat and fish' tackle constituting a six-fold purchase; sheaves 8-ins. in diameter, the three upper ones having roller bearings and three lower ones plain solid bushings. The lower block and hook weighed 75 pounds."

It is interesting to compare the life of a rope. To illustrate this, take two cases using exactly the same size and quality of rope; one to be worn out in hoisting coal from vessels, and the other to be used on a rope drive; all the wear on the ropes comes from its internal friction in bending over sheaves, and its external chafing in running on and off them. A record of the number of bends made by each of the ropes will be a convenient means of comparison. A rope 1 1/2 inches in diameter usually hoists from a vessel from 7,000 to 10,000 tons of coal on a well arranged hoist. The rope will have a working stress of from 850 to 900 pounds, running over three sheaves, one 12 inches and two 16 inches in diameter; in hoisting 10,000 tons it makes 20,000 trips, bending in that time from a straight line to the curve of the sheave, or vice versa, 120,000 times. The rope, when this service is completed, is worn out and must be replaced by a new one.

To illustrate the endurance of a rope used in the transmission of power, take a tin-plate mill transmitting 1,000 horse power to the rolls by means of a 1 1/2 inch diameter manila rope. In one particular case the sheaves are 5 feet and 17 feet in diameter and 36 feet apart, center to center, making 13,900 bends per hour, or more bends in nine hours' service than the other rope made in its entire life. As is well known, the life of a transmission rope is measured by years, not hours. This enormous difference in the life of ropes of the same size and quality is wholly gained by reducing the stresses on the rope and increasing the diameter of the sheaves.

The weakening effect given in the table of various knots, hitches and bends used in rope tackle is based upon experiments made in the laboratory of the Massachusetts Institute of Technology. Forty-five pieces of 2 1/2 inch circumference, 3-strand manila rope, cut from one coil, were broken in sets of from three to seven ropes, each rope of a set having the same fastening, and an average of each set computed. Each different set tested some one of the fastenings in common use. The results were not erratic, but consistent, and from them a safe conclusion can be drawn. In examining the various knots broken, it is evident that those fastenings in which the standing part makes a short bend over another part of the rope are the weakest. Those like a round turn and a half-hitch, or a timber-hitch, have a less abrupt bend in the standing part, and are materially stronger. With care, an eye in the end of the rope having the ends of the strands tapered down, can be spliced over an iron thimble so that it will have substantially the full strength of the rope, but as it is usually made it is not so

strong, for which due allowance is made in the table. The same remarks apply to a splice in a rope.—A paper presented at the New York meeting (December, 1901) of the American Society of Mechanical Engineers.

ESTIMATES ASKED FROM CONGRESS FOR AIDS TO NAVIGATION.

NINTH DISTRICT.

Milwaukee Breakwater and Harbor of Refuge Wisconsin, light and fog signal.....	\$ 75,000.00
Fisherman's Shoal light and fog signal station, Wisconsin	75,000.00
Pointe aux Barques light and fog signal station, Michigan	32,000.00
Portage Lake light-station, Michigan, keeper's dwelling	3,500.00
Kewaunee light and fog signal station, Wisconsin, keeper's double dwelling	7,500.00
Calumet Pierhead light station, Illinois, keeper's dwelling	Authority 6,000.00
Holland Pierhead Range, Michigan, fog signal..	14,000.00
St. Martin Island light and fog signal station, Michigan, additional	20,000.00
Little Gull Island light and fog signal station, Michigan	15,000.00
Peshtigo Reef light vessel, Green Bay, Wisconsin	30,000.00
Tender for inspector Ninth light-house district, completing	65,000.00
Tender Hyacinth for the engineer Ninth light-house district, completing	50,000.00
Depot for the Ninth light-house district	

TENTH DISTRICT.

Tibbetts Point, St. Lawrence River, New York, keeper's dwelling	3,500.00
Fort Niagara, New York, small light at mouth of river	2,000.00
Strawberry Island cut and channel, Niagara River, New York, range lights	13,000.00
Toledo harbor light and fog signal station, Ohio, completing	10,000.00
Grassy Island Range (Ecorse) light station, Michigan, keeper's dwelling	5,000.00
Grosse Isle South Channel Range light station, Michigan, keeper's dwelling	5,000.00
Grosse Isle North Channel Range light station, Michigan, keeper's dwelling	3,500.00

ELEVENTH DISTRICT.

Middle Island light and fog signal station, Michigan	25,000.00
Crisps Point light and fog signal station, Michigan	18,000.00
Rock of Ages light and fog signal station, Michigan	125,000.00
Eagle River light station, Michigan, moving to Sand Hills	25,000.00
Isle aux Peches Range, Michigan, additional lights	12,000.00
Tawas light station, Michigan, keeper's dwelling	5,000.00
Martins Reef light vessel, Lake Huron	35,000.00
Spectacle Reef, Michigan, Lake Huron, repairing Relief light vessel for Ninth and Eleventh districts	54,100.00
Tender for St. Mary's River, Michigan	30,000.00
	75,000.00

STATEMENT OF THE VISIBLE SUPPLY OF GRAIN.

As compiled by George F. Stone, Secretary Chicago Board of Trade, January 4:

CITIES WHERE STORED.	WHEAT Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BALLEY Bushels.
Buffalo	6,751,000	734,000	850,000	31,000	1,298,000
" afloat	1,074,000	84,000			
Chicago	6,766,000	4,879,000	881,000	961,000	148,000
" afloat	417,000			77,000	
Detroit	845,000	195,000	6,000	125,000	42,000
Duluth	9,340,900	367,020	153,000	441,000	251,000
" afloat	511,000				
Fort William, Ont.	2,724,000				
Milwaukee	416,000	81,000	18,000	47,000	148,000
Port Arthur, Ont.	65,000				
Toledo	280,000	742,000	824,000	252,000	1,000
Toronto	36,000				43,000
On Canals	46,000	3,000	112,000	37,000	50,000
Grand Total	58,929,000	11,702,000	5,002,000	2,361,000	2,324,000
Corresponding Date, 1900	61,245,000	10,420,000	9,632,000	1,266,000	2,483,000
Increase for week	281,000	450,000	264,000	120,000	129,000
Decrease					

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

TOLEDO'S WINTER FLEET.

The Toledo winter fleet consists of forty-two vessels as follows: Steamers—Aztec, Russell Sage, John C. Gault, James Fiske, Jr., Vega, Preston, Gettysburg, J. H. Outhwaite, S. C. Reynolds, Rube Richards, John E. Hall, John N. Glidden, Thomas S. Christie, Sachem, C. Hickox, Miami, Chippewa, Iroquois, Pastime, American Eagle. Schooners and Barges—Arthur, John Miner, John Schutte, George G. Houghton, Saveland, H. H. Badger, Miztec, William Brake, C. G. King, J. T. Johnson, A. Gebhardt, C. C. Barnes, Polynesia, May Richards, J. I. Case, Emma C. Hutchinson, Sunshine, H. C. Sprague, John R. Noyes, Abram Smith, George P. Owen, Yukon.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD).

Contributory Negligence.—The defendant's evidence tended to show that the barge was not crowded, and the passengers, especially the plaintiff, were warned not to go on the bow deck; that this deck was twice cleared of passengers, including the plaintiff, and the doors in a partition separating this deck from the passenger deck were closed and hooked; that plaintiff was near the hawser, on the bow deck, watching it tighten and slack, and saw it loop when the tug turned; and that he was warned by a companion just before the accident. Plaintiff's testimony tended to contradict this evidence, and to show that when warned by his companion he tried to escape, but too late. Held, that plaintiff was not, as a matter of law, guilty of contributory negligence in being where he was, or in not exercising better judgment, under the circumstances, to avoid the injury. Hill vs. Starin, 73 N. Y. Supp. 91.

Navigation on Great Lakes.—The statutory rules enacted in 1895 to govern navigation on the Great Lakes (28 Stat. 645) expressly provide, in Rule 28, that they shall not operate to exonerate any vessel from the consequences of "any neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case," and such rules do not supersede any usual requirement of prudent navigation not inconsistent with their positive provisions. In determining what constitutes the "cautious" navigation required by Rule 15, after vessels approaching in a fog have reduced their speed as therein provided, under the circumstances of any particular case, resort must be had to the general principles and requirements established by the decisions of courts of admiralty; and a vessel will be held in fault for a failure to stop and reverse in such case, where prudent navigation required it. The George W. Roby, III Fed. Rep. (U. S.) 601.

Stipulations in Bill of Lading.—Stipulations in bills of lading exempting the vessel from liability for cargo lost as the result of collision, or provisions that the carrier, if held liable for loss of cargo, shall have the benefit of insurance thereon, have no application to a case where the vessel is sunk and lost, with her cargo, though collision for which both vessels were in fault, and the second vessel is allowed to recoup one-half the cargo damages awarded against her from the damages awarded in favor of the sunken vessel; nor do they apply because the claim of the vessel sunk is postponed to that of her cargo owners, the fund being insufficient to pay in full. In such case the right of a re-coupage does not depend upon the relation of the carrying vessel to her cargo, but upon the relation of the colliding vessels to each other, and the right of preference upon the equitable principle that where the fund available is insufficient to pay all claims those of the innocent cargo owners are to be preferred over those of one whose fault contributed to the loss; and no question of liability of the carrying vessel to her cargo owners is involved. The George W. Roby, III Fed. Rep. (U. S.) 601.

Personal Injuries.—Common Carriers.—Duty to Passengers.—Negligence.—Sufficiency of Evidence.—Plaintiff was a passenger on a barge towed by a tug, which was owned and operated by defendant. The tug was attached to the barge by a hawser passed through a chock in the bow of the barge, and fastened to a cleat in the bow deck floor. Plaintiff was on the bow deck, when the hawser tore away the chock and side rail, and either broke or slipped from the cleat, catching plaintiff's leg, and cutting it off. Plaintiff's evidence tended to show that the hawser was insecurely fastened, and too long; that the tow turned nearly at right angles, and when the hawser became taut the barge was tipped so that furniture slid along the deck, and people fell down. Defendant's evidence tended to show that the hawser was properly attached, and did not break; that the chock was in a reasonably safe condition, and the vessels were carefully navigated. Held, that the evidence was sufficient to sustain a finding that the defendant failed to exercise the care in attaching the tug to the barge and in navigating them which, as a common carrier, he owed to his passengers. Hill vs. Starin, 73 N. Y. Supp. 91.

Public Administrator.—Right to Property of Unknown Decedent—Fund in Court of Admiralty.—A number of gold coins and bank notes were taken by the crew of a fishing schooner from the body of a man found floating in the sea, and who had been a passenger on a steamship sunk in collision some weeks before. The money was paid into the registry of an admiralty court, and an award for salvage service was made, and paid therefrom to the owners and crew of the schooner. The body was buried at sea, and after a lapse of more than two years remained unidentified, except for a name in a receipt found thereon, and no relatives or heirs were known. Held, that the public administrator of the county in which the admiralty court was located, who had been granted letters of administration on the estate of the decedent by the probate court pursuant to the statutes of the state, was entitled to possession of the remainder of the fund in preference to the salvors, claiming as the finders of lost goods, whose owner was unknown, or to the United States, claiming as successor to the prerogative rights of the king of England. Gardner et al. vs. Ninety-nine Gold Coins et al., III Fed. Rep. (U. S.) 552.

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CLEVELAND, O., JANUARY 9, 1902.

ERIE CANAL IMPROVEMENTS.

There is some interesting news from Buffalo in Governor Odell's message to the incoming Legislature. The Governor will recommend extensive improvements to the Erie Canal and the establishment of a toll system out of which a sinking fund may be created that in twenty years will pay the entire cost of the improvements. It is said that the Governor will recommend the expenditure of something like \$27,000,000 for the building of a 1,000-ton barge canal, for which the canal advocates in Buffalo have so long and sturdily fought. The Governor does not propose that the \$27,000,000 shall be at once appropriated or raised by bond issue. He will suggest that by the expenditure of \$13,000,000 the present locks in the canal may be lengthened that 1,000-ton barges, drawing 6½ feet may pass. Subsequently he suggests an expenditure of \$14,000,000 to deepen the canal so that 1,000-ton barges, drawing 7½ feet of water, may navigate it. This is according to the 1895 plan. The Governor will propose that these sums shall be raised by bond issue and that a toll of 15 cents per ton shall be collected; that these tolls shall be made to establish a sinking fund, and it is his belief that the tollage will in twenty years serve to pay the cost of the proposed improvements. It is understood, too, that the Governor will in his message deal rigorously with the discrimination against the canal boatmen and in favor of the railroads by the Buffalo elevators. It is believed that he will recommend drastic legislation to correct these abuses.

CLIPPER SHIP RECORDS.

The Shamrock II. is credited with a speed of over 14 knots an hour for short distances when everything was in her favor. The Columbia has never actually covered 14 knots in an hour, but has sailed at a speed of fully 14 knots for as much as ten minutes together. For long runs in cruising rigs no yacht has ever exceeded 11 knots an hour. The Valkyrie II. in June, 1894, on her voyage home to Scotland, did a best day's run of 256 knots, which gives her a speed per hour of 10.62 knots, says the London Mail.

Seeing that the modern racing yacht is a sailing machine pure and simple, nine persons out of ten imagine that it represents the acme of speed obtainable from wind. To these it may come as a shock to hear that there have been during the past century, and are to-day, sailing vessels afloat which in a long race even the Shamrock II. would stand no chance at all.

The Aberdeen clippers of the early 60's were the first craft to show what could be done in the way of speed

under sail. The Maid of Judah in 1860 made the passage from London to Sydney in 78 days. The Lillies, a clipper of 1,665 tons, took troops from Dublin to Gibraltar in four days and later sailed from Liverpool to Melbourne in 79 days. On this occasion she logged 365 miles a day for several days in succession. This is more than one-third as fast again as the Valkyrie II.'s best record.

The well-named Hurricane of the Thames and Mersey line came home once from Melbourne in 78 days. On this occasion she achieved what is probably a world's record for speed. She ran 270 miles in 16½ hours—a speed exceeding 16 miles an hour, a performance that her builders and owners might well be proud of.

In 1867 occurred the greatest of China tea clipper races. Fourteen ships took part. The Ariel won, covering the distance from Foo-Chow to London in 102 days. The curious part of this race was that a ship which was not entered for the race, the Sir Lancelot, of Greenock, a composite-built vessel, beat everything else by three days. The Sir Lancelot was 750 tons burden, and carried 46,000 feet of canvas—that is, just over an acre. Her main mast was 200 feet high. Her record of 14,000 miles in 89 days still stands, while her best day's sail was 354 statute miles in 24 hours. The absolute record, however, for a 24 hours' run belongs to the Thermopylae, a 948-ton clipper. On January 3, 1870, she sailed 380 statute miles—a rate of 15.8 miles an hour. The enormous five and six masted fore and after rigged ships of to-day carry on these traditions of speed.

It is, of course, the size of these ships which gives them the advantage over racing yachts. The displacement of cup yachts, all under 150 tons, makes the difference between them and the big trading clippers almost as great as between a small steam tug and the Kronprinz Wilhelm.

MAKING IRON AT SYDNEY.

A correspondent of the Chicago Record-Herald writing from St. John's, N. F., describes the present status of the Sydney iron industry. He says: The Chicago steamer Northwestern, which made the experimental trip from Chicago through the lakes and St. Lawrence to Hamburg, is now engaged in the Newfoundland iron ore trade. She is carrying cargoes of ore from Wabana, near here, to Sydney, C. B., to be smelted. Wabana is the name of the mine on Bell Island, eighteen miles from St. John's, which has the most remarkable deposit of its kind in the world. It is an open quarry of the mineral, containing 34,000,000 tons, laid in almost horizontal strata, the material being in the form of small cubes, which only require a charge of dynamite to shatter into millions of fragments. These are shoveled up into wagons, carried over an endless cable to the piers and dumped into the steamer's hold. Vessels are loaded at the rate of 1,000 tons an hour, and the largest freighters that ply there, which have a capacity of 7,000 tons, secure their cargoes within a day. It is a thirty-six hour run to Sydney, and discharge is effected within a day also. Two round trips can almost be made within a week. The mine is accessible from April to December, during the remainder of the year access to it is prevented by ice. But during the open period enough ore is got out to last the whole year through, and to accomplish this extra steamers are now being put on and the mine is being worked to its utmost capacity.

The deposit of ore enabled the Sydney smelting enterprise to be established. The ore can be mined at Wabana for 25 cents a ton, and brought to Sydney for another 25 cents. The total cost of assembling there the iron, coal and lime required to make pig iron is but 79 cents a ton. At Sault Ste. Marie it is \$1.97 and at Pittsburg \$3.58. It is easily seen, therefore, what a future there is before the enterprise. It is destined to fix the price of iron and steel for the world ere long, so its promoters say. This may be boastful, but the demand for the crude ore and smelted product is substantial evidence that the scheme has all the elements that insure success.

The Northwestern will probably be employed during the winter when the ore carrying ceases, conveying pig iron to British or American ports, where a market for this product is being opened up. The manufacture of steel is next to be undertaken and this will increase the industrial possibilities of the concern and enlarge the fleet of freighters employed about the transport. At present twenty steamers are engaged carrying coal to Montreal, bringing ore from Wabana or conveying pig iron to Glasgow—the leading market for it so far.

NOTES.

SENATOR FRYE says that his ship subsidy bill will be taken up by the Senate Committee on Commerce at its first business meeting next week. He believes that it will be reported favorably.

THE Joseph Dixon Crucible Co., of Jersey City, N. J., continues to lead all competitors in fine quality of lead pencils of all descriptions. For fifteen years the MARINE RECORD staff has been using these pencils, and never a "cuss word" in consequence of lead breaking, as they never break. The Dixon pencil now leads the world's manufacture.

THE Secretary of the Navy has prepared for submission to Congress a bill providing for the establishment of a naval training station on the Great Lakes. A pending bill before the House provides for the erection of such a station at Milwaukee, but the department bill leaves the location to be fixed by a board of naval officers. The station is projected on lines like the station at Yerba Buena Island in San Francisco harbor.

A MEETING will be called of the owners of power on the waters between the Georgian Bay and the Trent river, to have a conference with the Dominion government, the object being to secure a better regulation of the flow of water. It is contended that in the spring the water goes to waste, and it is not reserved, while in the summer and fall it is so low as to seriously interfere with the production of power. There are many available reservoirs in these waters, which, with proper regulation, should give good power the whole season.

THE United States steamship Georgetown, that has recently been built for the United States government, is fitted with Boyer patented sectional water tube boilers which were manufactured by John E. Thropp & Sons Co., Trenton, N. J., for L. Boyer's Sons, 90 Water street, New York. The boiler occupies a space 66 by 96 inches, has a heating surface of 1,400 square feet, and a grate surface of 30 square feet. The boilers weigh 12,500 pounds, and the water weight is 1,950 pounds. The boilers furnish steam for two triple expansion engines 7x10x15 inches by 8 inches, making 350 revolutions.

A GOLD medal has been awarded the Continental Iron Works, Brooklyn, N. Y., for the Morison Suspension Boiler Furnaces, exhibited at the Pan-American Exposition. These furnaces are in great favor for land and marine boilers. It is claimed that their form of construction offers the greatest possible resistance to distortion or collapse and a freedom from leakage not to be obtained in furnaces which consist of sectional flanged and riveted cylinders, with reinforcing rings interposed between the flanged, or any other method. The Continental Iron Works are the sole manufacturers in this country for the Morison furnaces.

THE Taunton-New Bedford Copper Co., New Bedford, Mass., which has a New York office at 77 Water street, and a Boston office at 61 Batterymarch street, is the sole manufacturer under license from Wm. Cramp & Sons' Ship and Engine Building Co., for Parsons' Manganese bronze in this country. It is claimed for this metal that for great tensile strength, elasticity and elongation, coupled with unusual non-corrosive qualities, that it cannot be excelled. This bronze can be forged at a cherry-red heat. It is especially well adapted for hull plates for yachts and launches, and also for pump linings, condensers, rudders and other parts of a ship where non-corrosive qualities are desirable. In addition to being sold in rolled sheets and plates, it is made in round, square and hexagon rods for studs, bolts, nuts, pump and piston rods, yacht shaftings, etc.

W. MARCONI'S experiments with his wireless telegraphy in Newfoundland, have resulted in his obtaining signals from his station at the Lizard, Cornwall, England, a distance of 1,700 miles. Balloons were used to suspend the vertical wire, at a height of about 800 feet, and a special code of signals had been agreed on to be used at a given time, which signals were received at intervals by Mr. Marconi. The inventor will return to England to further improve his apparatus in the light of the discoveries made. The Anglo-American Telegraph Co., which has a monopoly of cable privileges in Newfoundland until 1904, has, it is reported, applied for an injunction preventing Mr. Marconi from proceeding any further with his experiments on the island, as his invention is likely to interfere with its rights. Pending a settlement of this question, further experiments will be made from a point in Nova Scotia.

DULUTH-SUPERIOR.

Special Correspondence to The Marine Record:

Fire at the West Superior shipbuilding plant Thursday night, completely destroyed the blacksmith shop and all the tools that it contained. The loss will amount to about \$10,000, fully covered by insurance. The most serious result of the fire will be to delay the work in the yards for some time. So far this winter they have been working day and night, but they are now liable to lose all that has been gained. One of the boats on the stocks was to have been launched the latter part of this month, but now the launching will have to be postponed until next month.

The calendar year of 1901 shows a splendid increase in the receipts and shipments of grain at the head of the lakes as compared with 1900. The total receipts of all grain (the last five days of December estimated) for the year just ending at the head of the lakes were 7,975,015 bushels, as compared with 51,431,960 bushels in 1900, and the total shipments were 6,464,881 bushels, as compared with 46,716,959 bushels. The total number of cars of grain received in 1901 is given at 88,118, with the number for the last five days of this month estimated, as compared with 64,347 cars in 1900.

Captain John Corrigan, a prominent Cleveland vessel owner and capitalist believes that next year will be one of the greatest lake men have ever seen. In an interview recently he said: "Next season will see a vast improvement both in the amount of ore shipped and in the rate of carriage. I expect that the Lake Superior ore rate will go to \$1. Concerning the shipment of coal, the upper lake docks have a scantier supply now than they have had for years, and it will necessitate an early and heavy shipment to relieve the situation. It looks to me, therefore, like a bright year ahead."

Capt. A. B. Wolvin of Duluth, who some time ago, sought certain rights for elevators, warehouses, etc., from the harbor commissioners of Montreal, but was not successful in arriving at an agreement, is now conducting similar negotiations with the harbor commissioners of Quebec. He was in conference a few days ago with officials of that port and the directors of one of the Canadian railways, the Great Northern. Capt. Wolvin is quoted as saying that interests which he represent will begin at once the construction of ten steel steamers for St. Lawrence river trade, if sufficient inducements in terminal facilities are offered at Quebec.

The Exchequer Court has decided that the Minnie M., a U. S. steamer, purchased by F. H. Clergue, on behalf of the Algoma Central and Hudson's Bay Ry., and given a British registry, without leaving U. S. waters, is not liable for duty, on application being made for Canadian registry. The collector of customs at Sault Ste. Marie held that the vessel was liable to \$3,500 duty, which was paid under protest, and an action taken to recover the same, with the result as stated. Judge Burbidge said that while it was competent for the Dominion Parliament to impose such a duty it was not clearly or unambiguously imposed by the Tariff Act of 1897.—The Railway and Shipping World, Toronto.

The annual report of the Consolidated Lake Superior Co., which controls the extensive steel-making, railway, paper manufacturing and other enterprises in the Sault Ste. Marie district, being carried through by what is known as the Clergue syndicate, refers to the past year as an eventful one. The absorption of the Ontario Lake Superior Co. gave the consolidated company control of the Algoma Central Railway and steamship companies; the Manitoulin and North Shore Ry.; the Algoma Commercial Co.; the British-American Express Co., and the Algoma Central telegraph lines. The operating companies owned by the company are: Lake Superior Power Co., Sault Ste. Marie Pulp and Paper Co., Tagona Water and Light Co., Michigan Lake Superior Power Co., and the Algoma Steel Co., Ltd., just organized. On October 31 there was outstanding of preferred stock \$14,475,800. During the year ending June 30, 1902, there will be outstanding an average not exceeding \$18,000,000, upon which dividends for the year amount to \$1,260,000.

There was received at the head of the lakes to Dec. 1 this season 1,800,000 tons of soft coal. The amount that was received in the first half of the present month, before the close of navigation, was much less than in December of last year, when the amount was 40,000 tons. As the amount, 1,800,000 tons, is determined by estimates and percentages, it is considered probable that it is not far from the actual total for the whole season. The receipts of soft coal last season were 2,050,000 tons. On the face of these figures there is a shortage of 250,000 tons, but there has been an unquestionable increase in the coal trade and the actual shortage is much greater. Estimating the increased demand at 6 per cent, there is an additional shortage to be taken into account, which, added to the 250,000 tons, makes a total of 433,000 tons. The coal-men figure that the receipts of hard coal at the head of the lakes have amounted to 595,000 tons this year. At the opening of navigation there were 10,000 tons of hard coal on dock, making a total of 605,000 tons available this year. The normal demand for hard coal from this point is about 600,000 tons this year. It does not fluctuate as much as the soft coal situation, which is affected by the size of the crop in the northwest, industrial activity of all kinds, etc. There is a sensible increase however, in the demand for hard coal, and dealers say that if the winter is of more than average severity the stocks will all be cleared out by the opening of navigation.

PORT HURON.

Special Correspondence to The Marine Record:

The loss on the Dunford drydock has been adjusted by the Spalding & Maxwell agents. Messrs. Dunford & Son are well pleased with the prompt manner in which the representative of the company acted.

Steamboat Inspectors Van Liew and Stewart have completed their report and forwarded it to the supervising inspector. It will show a large number of accidents in the Huron district during the past year, the greater portion of them being confined to St. Clair river.

An effort is being made by the Factory Land Co. to induce the United States Rolled Steel Co., of Buffalo, N. Y., to locate in Port Huron. Elmer Vanness will report to the stockholders of the Factory Land Co. the proposition submitted by the company. The company employs over 100 men.

The steamer Conger, which is being re-built at Black river, will carry 1,000 passengers easily where it was hard work to carry 600 before she was burned. The boat will be fitted up with all the latest appliances and machinery. The cabin will be on the upper deck instead of on the main deck as formerly.

At a regular meeting of Huronia M. E. B. A. No. 43, held Thursday evening last, the following officers were elected for the ensuing year: Past president, Harvey De pup; president, A. J. Wilson; first vice president, George Robin; second vice president, James M. Oag; recording secretary, James A. Southgate; financial secretary, Walter G. Thorn; corresponding secretary, Thomas Coyle; treasurer, Edward Egan; trustees, Walter G. Thorn, Arthur Armon, Harvey Deputy; representatives to national convention, George H. Bowen and A. J. Wilson; alternates, Edward Egan and Walter G. Thorn.

Capt. Daniel N. Runnels of Port Huron and Capt. D. West of Amherstburg have purchased the tug Samuel J. Christian from Toledo parties and will use her on Detroit river next season. Last fall the Christian was sunk by the steamer J. J. Albright near Grosse Isle, Detroit river, the steamer J. J. Albright near Grosse Isle, Detroit river, and several of her crew lost their lives. She was subsequently raised and taken to Port Huron for reconstruction. A new boiler of 150 pounds pressure will be placed in the craft and she will be as good as new when she leaves the drydock in the spring. Runnels and West paid \$3,000 for the tug. Capt. West is an old Detroit river tugman and will command the craft.

Some two years ago a young man suddenly sprang into prominence in Port Huron, and as quickly disappeared. He had graduated from the High School, made a brilliant graduating speech, studied law with success in the office of Atkinson, Vance & Wolcott, and then suddenly and quietly passed out of the life of Port Huron. From that day to this few remember to have seen him. But this young man did not die to the world; on the contrary he has since had a remarkable career. Loving adventure he and another Port Huron boy started for anywhere, and wound up in Ireland. In the latter country, he won the hearts of the people of Newport by a speech celebrating the liberation of some Irish political prisoners. After being locally entertained, as only Americans are, he returned to America and became a sailor on the lakes. He had just attained the rank of second officer only to give it up for the position of a private in the Spanish war. Baffled in his attempts to enlist at Island Lake, he applied at Fort Wayne and joined the regulars. He was soon made corporal in the cavalry, and as such saw service in Cuba and Porto Rico. In the latter place he was practically military governor of a considerable district. When no longer needed he returned to the lakes. The remainder of his career to date is briefly stated. He soon rose high in the estimation of the steel trust, became first officer on one of their large boats, the Robert Fulton, and last fall gave up his position to study law at Ann Arbor. No doubt many will be glad to see the sign: "Frederick Leckie, Marine Lawyer."

THE WORLD'S TONNAGE.*

FLAG.	Steam Vessels.		Sailing Vessels.	
	No.	Tons.	No.	Tons.
		Net.	Gross.	
British { United Kingdom Colonies	7,161	7,402,750	12,053,394	1,773 1,602,767
America United States of	946	410,698	685,786	989 366,259
Austro-Hungarian	*760	674,506	1,003,795	*2,176 1,228,130
Danish	237	288,146	462,366	45 24,436
Dutch	365	238,908	410,468	414 97,726
French	307	328,959	515,530	116 62,579
German	679	544,600	1,068,036	568 338,847
Italian	1,293	1,501,282	2,417,410	493 488,372
Norwegian	339	420,051	657,981	874 459,557
Russian	859	494,533	810,335	1,462 816,885
Spanish	529	330,980	533,029	761 256,224
Swedish	466	475,554	734,557	163 51,798
	703	279,420	451,020	780 225,199

According to the latest report from Lloyd's Register of British and Foreign Shipping, 71 Fenchurch street, London, E. C.

LETTERS AT DETROIT MARINE POST OFFICE.

JANUARY 8th, 1902.

To get any of these letters, addresses or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of his list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Anderson G E, H S Holden	Little Fred-2, Portage
	Lauson Jno A-3, Iron King
	Ludwick Capt C
	McCormack J, G G Hadley
	McLarty Frank, Bge Maia
	McRae F C, D Houghton
	McDougall T A
	Mulhall Pat, R R Rhodes
	McNally Jno
	Maguire J Edw, Castalia
	Miller Chas, Quito
	Merrill I P, o4 Flint
	McIntosh Mrs, Commodore
	McNeil J R, Hoyt
	McGregor A B, Continental
	McIver Alex, Bryn Mawr
	McVittie W G, Admiral
	Milliken E P, D Filer
	McDean D L, New Orleans
	Marion N, Montgomery
	Nowak J, Mark Hopkins
	Nelson A H, Bryn Mawr
	Neville Wm, Merida
	Olmstead A G, Sacramento
	Pant Ed F, Fred Pabst
	Palmer Edw, Sitka
	Palmer Chas, Canton
	Odette Chas, Corona
	O'Hara M, Clarence Black
	Page George H
	Potter J W, Seattle
	Patterson Walter,
	Rossman Jno J, Loyalty
	Richards Ted, Viking
	Ryan J W, City of Cleveland
	Slene L, Tug Traveler
	Shelden Swen, J E Owen
	Stone E V, Buell
	Sternall H-3, Crescent City
	Stevenson Alice-2, Cormorant
	Tebt Alfred, Ida Keith
	Taylor Geo, Neptune
	Tyrrell Wm, R S Warner
	Taylor Capt R G, Hershl
	Vanidour M, H H Brown
	Wehner Wm, Gogebic
	Wright Capt Wm, Advance
	Woods Jno, Bryn Mawr
	Weir Wilson, J R Edwards
	Wood Albert W, Olympia
	Webster Chas, Priscilla
	Adams Chas, Axtel Mc-
	Dougall
	Richards Frank, Wawatam

AMERICAN SHIPBUILDING.

Tjard Schwartz, a German naval constructor, who was recently sent to the United States by the marine general staff to investigate shipbuilding, has submitted his reports.

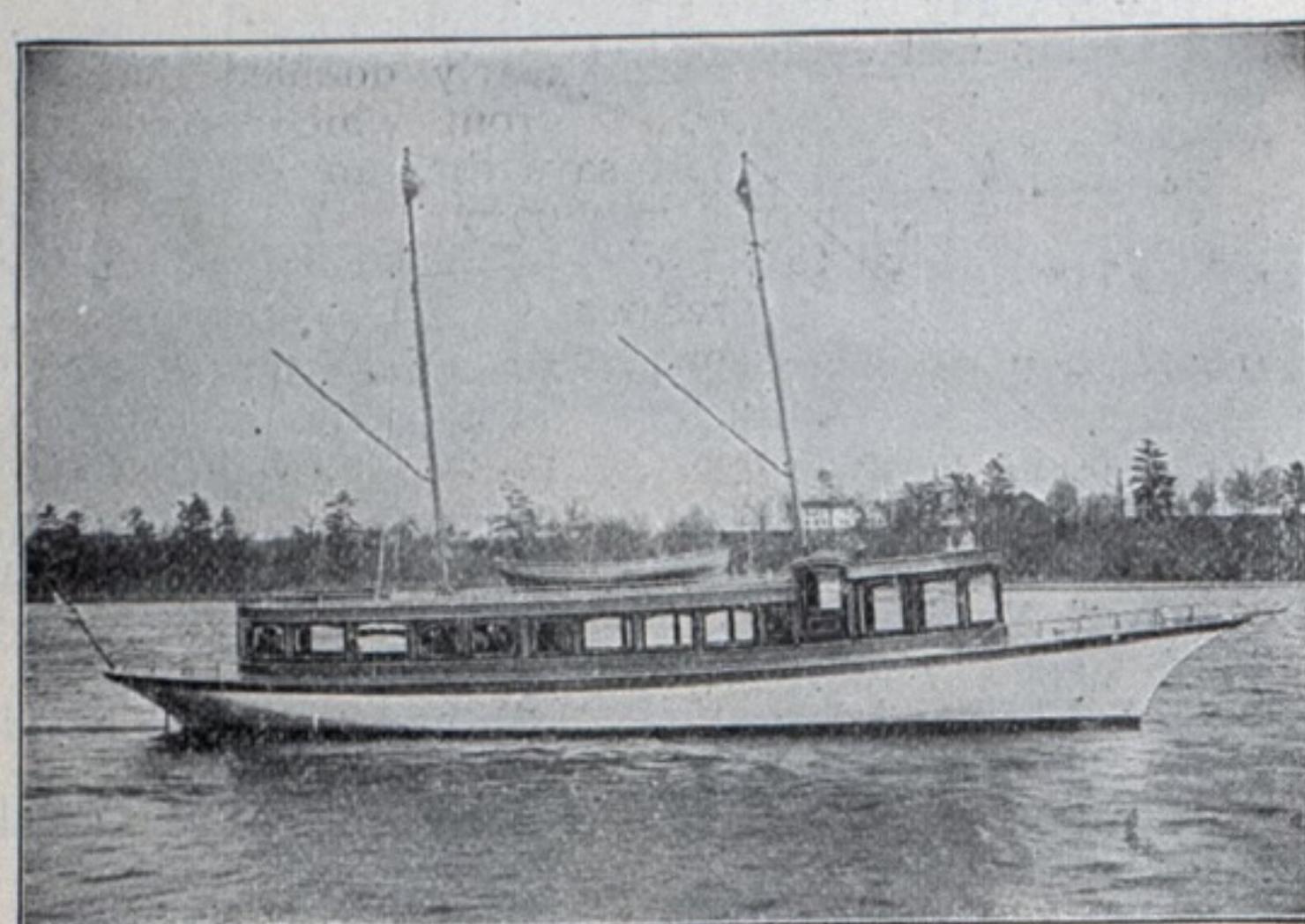
The investigator says that materials for the construction of steel ships are lower in price in the United States than in any other country and the only thing to be complained of is the fluctuation in prices, which makes competition with foreign shipbuilders difficult. He refers to the splendid body of American workmen earning wages from 30 to 50 per cent. higher than those paid in Great Britain and 100 per cent. higher than the wages paid on the continent.

Herr Schwartz reports that notwithstanding the wages paid, freighters are being built on the Great Lakes as cheaply as tramp steamers are built in Great Britain.

The new consolidation of shipbuilding companies in the United States, he says, is the largest and richest in the world, and that it will devote its resources to economic shipbuilding. In conclusion he says:

"We see, therefore, that the Americans are striving with all the means at their command to put their shipbuilding industry in a position successfully to compete with the long established English builders on the one hand, and on the other with the younger, but rapidly developing shipbuilders of Germany."

It is stated by those in close touch with the promoters of the proposed dredge trust that there is not one chance in ten of the deal going to a successful completion. At first the project started off briskly, but grave obstacles have been encountered in bringing the various concerns into line, and to the promoters the outlook is far from encouraging. The trust, if it had been formed, would have been one of the most important on the lakes, controlling the cost of harbor improvements at every port. The trouble in bringing the organization to a head arose from the difficulty in fixing the value on the different plants which were to go into the combination.



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IRON ORE MINING IN MINNESOTA.

In the Journal of Political Economy Julius Moersch has an interesting article on "Iron Ore Mining in Minnesota," in which he says:

The iron ore mines of Minnesota, so far as they are developed, are situated in St. Louis county, about midway between Lake Superior and the boundary line of Ontario. They are located in two ranges, which are about twenty miles apart and extend in an easterly and westerly direction; the more southern of the two is the Mesaba, and the other the Vermillion range. The ore deposits do not stretch in an interrupted body across the country; they are scattered along in groups, at irregular intervals, long stretches of non-merchantable ore being sparsely interspersed with groups of rich mines. On the Vermillion range two groups of mines are now in operation; one at Ely and the other near Tower, on the east shore of Lake Vermillion. The mines on the Mesaba range are centered around the towns of Biwabik, McKinley, Sparta, Eveleth, Virginia, Mountain Iron and Hibbing. A number of new mines are being developed near Sharon and Buhl. All mines on the Vermillion range are underground. There is no mine over 250 feet in depth on the Mesaba range, but quite a number are surface or daylight workings. The way in which the ore from such mines is extracted differs materially from the old practice of mining underground deposits; two systems are in use, milling and steam shovel work. The latter is conducted on the same plan as the work in an ordinary gravel pit and sand is stripped off the ore body. The ore is shaken loose by powder blasts and loaded by steam shovels into railroad ore cars. In order that this system of work shall be economical, there must be no delays. The milling system is resorted to in all the mines where the ore body lies at no great depth from the surface, and where, for various reasons, steam shovel work is not advisable.

The essential features of the milling system are, first, the removal of the overlaying ground and the sinking of hoisting shafts in the side walls to the bottom of the ore deposit. Drifts and cross cuts are made from the shafts through the ore body, and numerous raises are cut to the surface. The raises are timbered and provided on the lower end with proper appliances for loading the ore into tram cars. The ore on their surface is loosened by blasting and falls down the raises. At the bottom it is drawn out and conveyed to the shafts, where it is hoisted to the surface. This system of mining is very economical and requires very little timbering, aside from that of the drifts, cross cuts and raises.

All the ore from the Vermillion range, and much from the Mesaba range, goes to the docks at Two Harbors; the remainder is taken to West Duluth, or to Allouez Bay, near West Superior. Three railroads divide the transportation of the ore from the mines to the docks.

The great bulk of the men employed in the mines, seven to eight thousand, are foreigners. John Pengilly, general manager of the Chandler mine at Ely, says in a description furnished to the Geological and Natural History Survey of Minnesota: "There are not more than 10 per cent. of our men who speak the English language, and not more than the above number who have the remotest idea of mining." Nearly 40 per cent. of all so-called miners are Finns; another 40 per cent. are Austro-Hungarians; Italians form 8 per cent. of the whole and the rest are American, German, Scotch, Swedish, Canadian, Welsh.

Each of the two principal classes present features of interest to the student of political economy. The Finnlander, as a rule, is a strong, well built person, all muscle and bone, and from childhood used to hard work and meagre fare. Reared under adverse circumstances and under an unsympathetic government, he came to this country buoyed by the hope of bettering his condition, and to enjoy the free exercise of political rights. It is his ambition to become a citizen, and one of his first acts, as soon as an opportunity is presented, is to declare his intention of naturalizing. Many Finnish miners invest their savings in farm land, working on the farm during summer and fall and returning to the mines for the winter; continuing thus until they

have cleared off all incumbrance from their future homesteads.

The Austro-Hungarian, a man well built and by nature fitted for hard work, shows different characteristics. He is not as ready to become assimilated, his thoughts linger more in the wild Pushtas of his far-off country, and it seems to be his dream to get enough money to go back there to live. There are, of course, many exceptions to the rule:

Of the third large class of mine workers, the Italians, it is to be said that they are not of such strong physique as the Finns or the Austrians, but they are persistent in their work; and, as one mining captain put it, "they do not take such big shovelfuls as the others do, but they pick away, and when the day is over I find that they have done just about as much work." They are, however, better adapted to surface work, and prefer to labor in places where the sun is shining upon them.

The sturdy Cornishman is considered the mainstay in all mines. He is an experienced, cool-headed miner, reliable, temperate and industrious. Out of this latter class come the greater number of mining captains, foremen and bosses. Our nationalities have too small a representation among the miners to be especially discussed here.

Underground mines on the Vermillion range continue their operations after closing of lake navigation, the winter's production being deposited on the surface for future shipment. But things are different on the Mesaba range; here we find many open pit or surface mines. They are worked during the navigation season only, and the men are forced to idleness for the remainder of the year or have to hunt work in the logging camps on the range. Other mines, which are worked by the milling system, reduce their working force with the advent of winter, and they naturally give preference to the married men. Moreover, taking into consideration the fact that the mines on this range are as yet in a state of development, it is obvious that the inducements for married miners to settle down are not very great, and this, together with outside influences, has created a disposition of unrest and an inclination to shiftlessness among miners; it has brought forth the tramp miner.

M. E. B. A. OFFICERS ELECTED.

In addition to those already noted in the columns of the RECORD, the Marine Engineers' Beneficial Association elected the following local officers:

Saginaw Lodge—President, A. G. Mull; vice president, Richard E. Nantell; chaplain, W. P. Whalen; treasurer, John Henry; financial secretary, Walter Henry, recording secretary, George A. Thresher; corresponding secretary, Harry E. McArthur; conductor, Alexander Frazer; door-keeper, Fred Pflueger; representative to national convention, John Henry.

South Haven Lodge, No. 102—President, W. H. Tyler; vice president, Charles W. La Bounty; recording secretary, Harry E. Bullen; corresponding secretary, Fred W. Linsemeyer; financial secretary and treasurer, Perry N. Knaggs; board of trustees, Perry N. Knaggs, A. C. Krogman, Ralph Peterson, representative to national convention, Perry N. Knaggs; alternate to convention, Walter L. Rounds.

Duluth Lodge, No. 78—President, Lewis Griggs; first vice president, R. F. Barrows; second vice president, John Plase; secretary, F. A. Rehder; treasurer, Armour Harvey; trustee, J. P. Burg; delegate to national convention, R. F. Barrows; alternate to national convention, L. McNamara.

Thunder Bay Lodge, No. 85, Alpena—President, Horace Carter, vice president, William Hamilton; recording secretary, Charles Warwick; corresponding secretary, G. H. Miller; financial secretary, Charles Warwick; treasurer, Harry D. Irwin; trustees, William Hamilton, Thad Kneale, Richard Plepkorn; representative to national convention, Charles Warwick; alternate to national convention, William Hamilton.

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A WALL OF WATER NINETY MILES HIGH.

A disciple of the flat earth theory whose name is McClelland, and who is the city clerk of St. Catherines, Ont., argues that, says a contemporary, if Marconi has received a message from Cornwall, England, at his receiving station in Newfoundland, the fact proves the fallacy of the generally accepted theory that the earth is globular in shape. He pointed out the "three dots," thus said to have been repeatedly received at the observing station in Newfoundland the other day from the operating station in England, 1,700 miles away, represented the letter "S" in the Morse code, the system still in use. While expressing no opinion as to the genuineness of the test, or its possible commercial value, he was highly elated at the published reports, because they tend to confirm his pet belief that the earth is not a globe, if it should turn out that such signals could thus be transmitted.

Mr. McClelland held that a mechanically produced electric flash or wave, or whatever it may be called, is identical with a ray of light. It has no inherent density to bolster up the Newtonian myth of "gravitation" and must necessarily proceed in a straight line, unless conducted through flexible mediums, such as wires, just the same as a ray of light does, until its influence or penetrating power is lost. No human agency will send a ray of light around a corner. It must go straight ahead—and does.

Arguing from these premises, Mr. McClelland called attention to the absurdity of an electrical signal, or wave, or influence reaching Newfoundland from England—a distance of 1,700 miles—if the earth is globular in form, as the school books say it is.

"If," he said, "the earth is a globe, 25,000 miles in circumference, the curvature, or drop between the point in England from which the signals were sent, and the point in Newfoundland at which they are alleged to have been received, is exactly one million nine hundred and twenty-six thousand, six hundred and sixty-six feet, eight inches,

or about 365 miles. The electric flash or wave, in its aerial flight, would miss its mark by quite a bit, and would come about as near making its "three dots" perceptible on the moon, where imaginary things exist, as it would on the highlands of Newfoundland. These signals would have to surmount an obstacle in the shape of a pyramid of water 90 miles high, intervening between the sending and receiving stations, and would have to make an up-hill and down-hill journey to get to Marconi's outfit over here. A wall of water 90 miles in height stands as a barrier between the experimenters, if the earth is a globe.

"If the earth is not a globe, but is a vast, irregular plane, established on the floods with a recognized northern center and an illimitable circumference, or radius, then Marconi is all right, and modern geography and astronomy are all wrong. If Marconi is all right, the earth cannot possibly be a globe, and there are hundreds of other things that will help Marconi out."

EASTERN FREIGHT REPORT

Messrs. Funch, Edye & Co., New York, report the condition of the Eastern freight markets as follows:

The year opens anything but propitiously, so far as freights are concerned, rates remaining nominal. There was some little indication of a more active movement from the cotton ports, but the supply of available tonnage seems quite equal to meet the demand, in consequence of which there is little prospect of any material improvement. In the general trades such as grain, coal, etc., there is absolutely nothing doing. A few charters have been made for timber for Spring loading, but in this case also owners have been unable to secure any advance in rates. There is some little enquiry for case oil tonnage to the East, one steamer having just been closed for Kurrachee and Bombay at 16 cents and further business could probably be consummated to other Eastern ports at proportionate rates.

Business in sail tonnage has been exceedingly light and with a number of vessels on the spot and near at hand, the situation does not present any encouraging features.

ACTION ON SEAMEN'S AFFAIRS.

The following resolutions, introduced by the delegates of the International Seamen's Union of America, were adopted by the convention:

Whereas, Treaties entered into by the United States and other nations give to those nations and vice versa the right to cause the arrest, detention and reclamation of seamen, who have simply violated a civil contract to labor on board ship; and,

Whereas, Such stipulations treat the seamen as the property of the vessel upon which he is engaged; and

Whereas, Such provisions are alike dishonorable to the seamen, and unnecessary for the carrying on of commerce, and utterly repugnant to modern ideas of liberty; therefore be it

Resolved, By the American Federation of Labor, in convention assembled, that the President and the Senate of the United States are hereby petitioned to cause the conditions be so amended as to restore to the seamen the ownership of his own body, and thus give to him the full right to quit any merchant vessel on which the service has become obnoxious to him, in any safe port in which such vessel may be at the time.

Whereas, Rafts containing several million feet of lumber, either cut, in logs or in piles, are being built and towed in the ocean; and

Whereas, Such rafts very often break loose from the steamer towing them and become extremely dangerous to navigation; therefore, be it

Resolved, By the American Federation of Labor, that such rafts ought to be entirely prohibited by law; and, further

Resolved, That copies of this resolution be forwarded to the Committee of the Senate, and the Committee on Inter-State Commerce of the House of Representatives.

Whereas, E. W. Clark is still in Thomaston (Me.) prison, therefore, be it

Resolved, That the American Federation of Labor renew its efforts to obtain a pardon for this man, who, by this time, has surely suffered enough to expiate his offense.

Whereas, Our merchant vessels are notoriously undermanned, both as to number of men employed and skill of those employed; and

Whereas, The shipowner is now the only judge of the skill required, as well as the number to be employed; and

Whereas, The shipowner, of his own volition, does not restrict himself in any way, but employs the cheapest men, regardless of race, nationality or skill; and

Whereas, Such action is tending to drive the native from the sea, and thus prevent the upbuilding of a body of American seamen to be depended on in any emergency. Therefore

Resolved, By the American Federation of Labor, in convention assembled, that we urge the passage of a bill to regulate the number of men employed by the size of the vessel, and setting a standard of skill in those employed.

RULES FOR BRIDGES.

The Secretary of War will, in all probability, establish rules to govern the Cleveland drawbridges before the spring navigation opens. At present beyond the city ordinances which have been passed from time to time under stress of some special grievance, there have been no laws governing the draws, and the railroads have been practically the masters of the situation. Last season shipowners and tug-boatsmen were greatly annoyed by the frequent delays to which they were put in getting in and out of the rivers, and several of them went to the government engineer to have their rights in the premises explained. As there were no laws or regulations of the government on the subject, the vesselmen obtained but little satisfaction.

Major Dan C. Kingman, the government engineer, Corps of Engineers, U. S. A., interested himself in the matter and hopes to have the regulations announced by the secretary before navigation opens. His plans are being delayed somewhat by the negligence of the city officials to respond to inquiries which he directed to them. Some time ago he sent out a number of letters to interested parties, including the railroad officials, vesselmen and city officials, asking their opinion as to what the regulations

should contain. He also announced that upon their reply he would call for a meeting where all differences would be discussed and a request sent to the secretary to adopt rules agreed upon by the different interests. All but the city officers have replied, and the engineer is now awaiting the copies of ordinances which he asked for. As soon as these are received the meeting will be called and a general understanding reached if possible.

The Secretary of War has full power in the matter and his dictates become law. When he makes an official order it will carry with it the repeal of all city ordinances on the subject. The regulations will probably include accurate results, limiting the time either party may have the right of way, the manner in which the draws shall be moved, etc.

THE LIGHT-HOUSE SERVICE.

At the close of the year there were under the control of the Light-House Establishment the following named aids to navigation:

Light-houses and beacon lights.....	1,306
Light-vessels in position.....	45
Light-vessels for relief.....	8
Electric-lighted buoys in position.....	11
Gas-lighted buoys in position.....	91
Fog signals operated by steam, caloric, or oil engines.....	179
Fog signals operated by clock work.....	222
Post lights.....	1,827
Day or unlighted beacons.....	752
Whistling buoys in position.....	77
Bell buoys in position.....	122
Other buoys in position, including pile buoys and stakes in Fifth district and buoys in Alaskan waters.....	4,780
In the construction, care, and maintenance of these aids to navigation there were employed—	
Steam tenders.....	34
Steam launches.....	11
Sailing tenders.....	2
Light-keepers.....	1,420
Other employes, including crews of light-ships and tenders.....	1,428
Laborers in charge of post lights.....	1,574

Collision.—Steamer and Tow.—Concurring Fault.—A steamer with three vessels in tow on a single line, altogether about 2,500 feet long, was coming down the Detroit river, but had stopped temporarily on the Canadian side, headed up stream, with the steamer in front. As she was turning with the tow to proceed down, and when she and the first tow had turned and headed southward, and were about 400 feet from the American side of the channel, the *Yakima*, a heavily laden steamer, was half a mile down stream, coming up. At this time the schooner *Helvetia*, the second of the tow, was headed directly across the river, and about midstream, while the last tow was still headed up stream. The navigable channel was straight, 1,800 feet wide, and the current about two and one-half miles an hour. The *Yakima* signaled her intention to pass between the fleet and the American side, which was assented to. Both steamers starboarded slightly, and the *Yakima* checked speed to about four miles. When 600 feet apart, the master of the *Yakima* observed that the tow was not under control and was not turning properly, but kept on, and, after passing the other steamer, turned in as close as possible to shore. The *Helvetia*, through improper steering, failed to follow the vessels ahead, but swung over towards the American side, and struck the bluff of the *Yakima*'s bow at right angles. Held, that the *Helvetia* was clearly in fault, but that the *Yakima* was also guilty of contributory fault, conceding that she was justified in attempting to pass on the side she did; that, being alone and ascending the stream, the duty rested upon her to keep out of the way of the descending tow, and to stop if the situation required it; and that she should have stopped when it first became apparent that the tow was not turning properly, the other steamer being then from 200 to 300 feet to her starboard side, where there was little danger of collision between the two. The George Presley et al., 111 Fed. Rep. (U. S.) 555.

THE LAKE FISHERIES.

In his annual report the commissioner of fisheries says that the collection of lake trout eggs in the Lakes Superior and Michigan which nearly doubled that of last year, aggregated 224,000,000 from which 19,000,000 fry were hatched. The report says the canvass of the Great Lakes was taken up only in 1899 when the yield and value were nearly equal to those of 1890, the largest on record. Total yield was 113,728,000 pounds, worth \$2,611,400. There were 9,670 persons employed in the fisheries and \$6,617,000 invested. In recent years, the fisheries of the Mississippi and tributaries have developed to such a degree that in 1899 they exceeded in quantity and nearly equaled in value the entire yield of the remaining interior waters of the United States except the Great Lakes. Musse shells extensively used in manufacture of pearl buttons were a valuable item, some 45,500,000 pounds being gathered for which fishermen obtained \$247,000.

The Ohio Coal Co., of Milwaukee, filed articles of incorporation with \$300,000 capital stock. David C. Owen, Chas. F. Hunter and Guy D. Goff are the incorporators. Mr. Owen has recently incorporated with C. H. Swan in the Swan-Owen Coal Co., and has also formed a partnership with Mr. Whitnall of the Whitnall & Rademaker Co., under the name of the Whitnall Coal Co. Whether or not the new company will have any connection with his associations he refused to state, saying that the plans of the new company would not be ready for announcement for several days.

WANTED—MACHINERY FOR A FIRE BOAT.

OFFICE OF THE BOARD OF PUBLIC WORKS, Milwaukee, December 10, 1901. Sealed proposals will be received at this office until Friday, January 10, 1902, at 10:30 o'clock a. m., for furnishing the propelling engine and its appurtenances, the steam fire pumps and the Scotch marine boilers for a new steel fire boat for the city of Milwaukee, according to plans and specifications on file in this office. Bidders desiring plans and specifications will be required to deposit the sum of \$50.00 as a guarantee for the safe return of the same. For further particulars apply to the Board of Public Works, Milwaukee, Wis., or to W. J. Wood, Naval Architect, 269 Fifth Avenue, Chicago, Ill.

52-1

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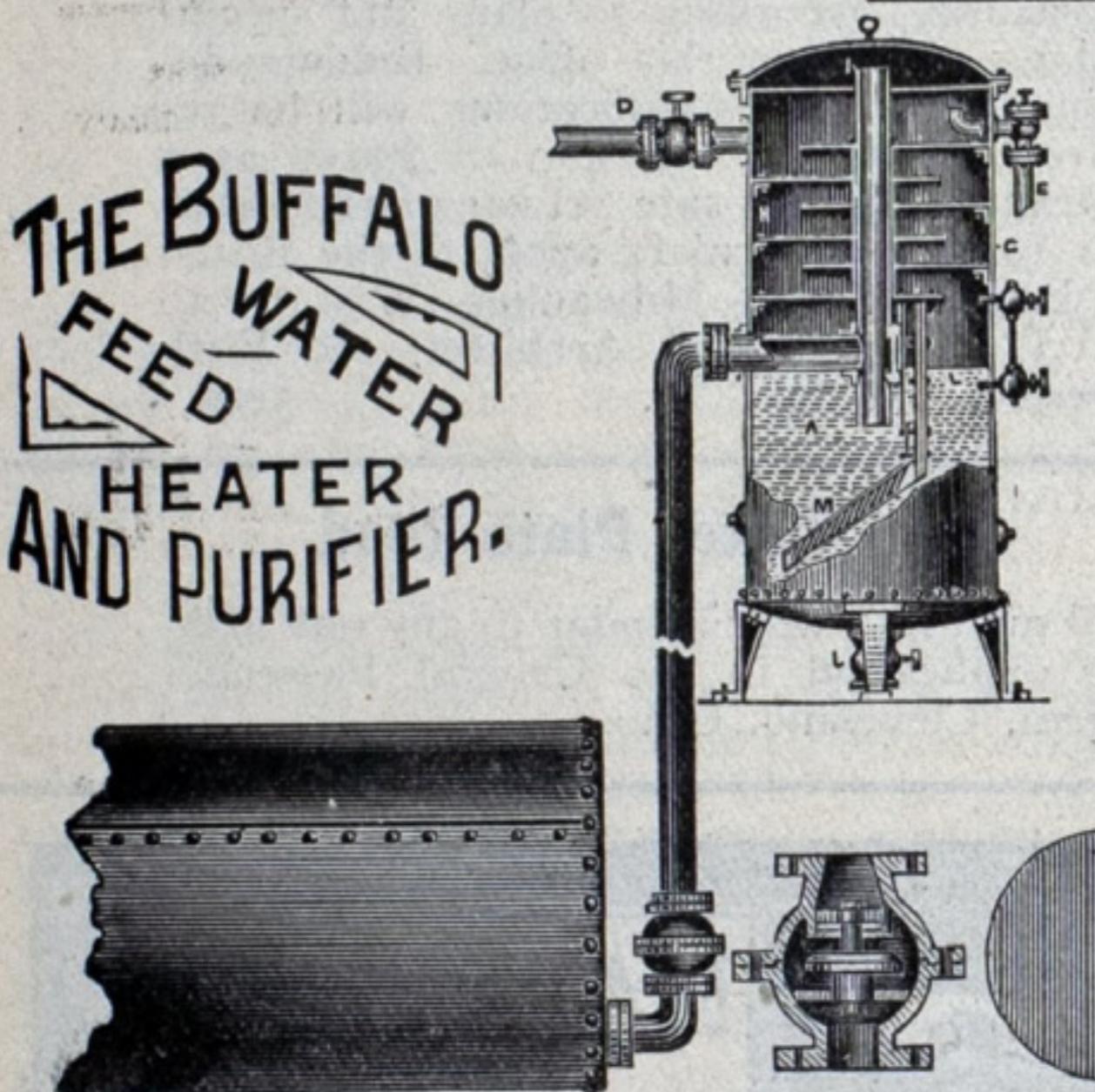
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Lake Michigan & Lake Superior Transportation Co.'s steamer Manitou.
Bessemer Steamship Co.'s steamers S. F. B. Morse and Douglas Houghton.
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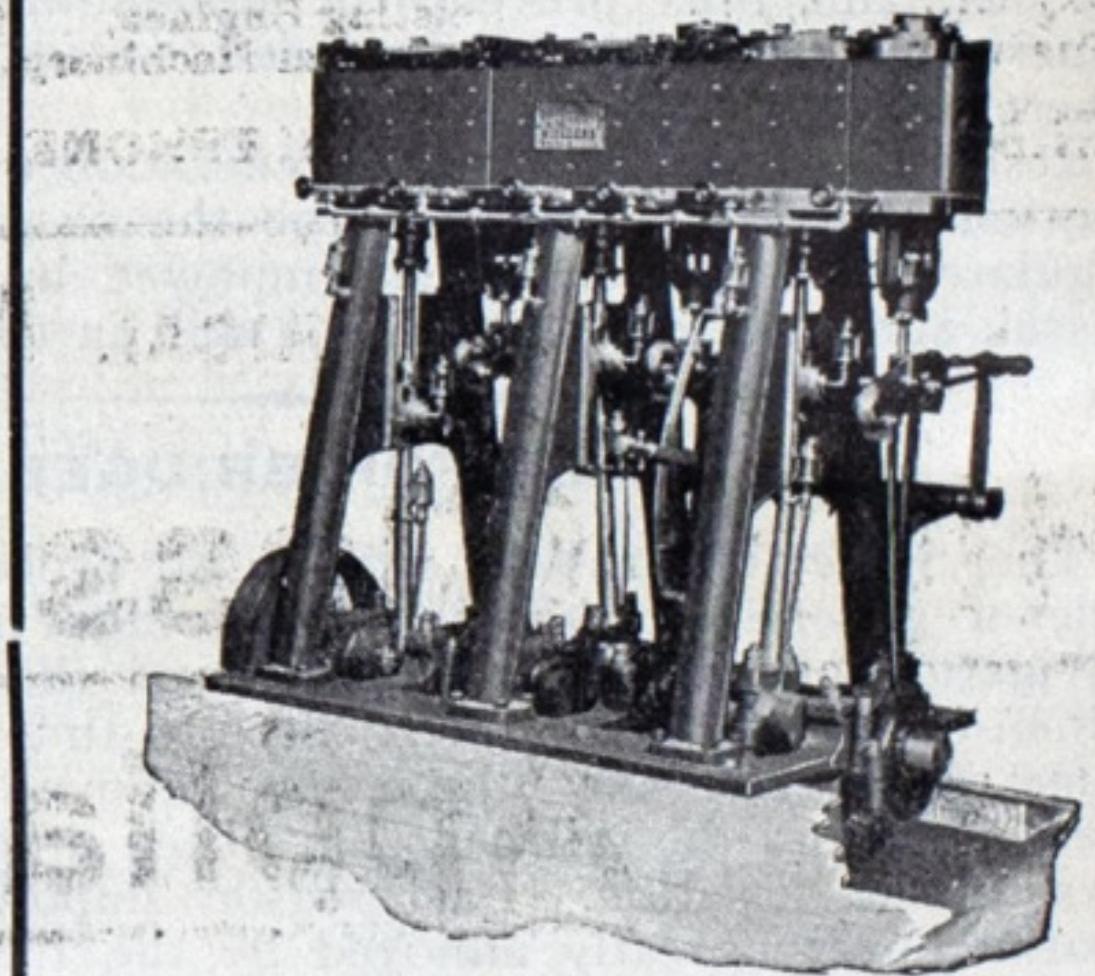


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FLOTSAM, JETSAM AND LAGAN.

A meeting of the Lake Tugmen's Protective Association held at Oswego, the following officers were elected for the ensuing year: President, Spencer Axtel; vice president, Charles Ferris, Jr.; secretary, A. Thompson; treasurer, Edward J. Igoe.

The Manufacturers' Railway, of Toledo, or the belt line around the city, has decided to build a new coal dock at that place and the work will be started at once. It will be half a mile in length and will be equipped with some of the most modern machinery.

Shipbuilding on the Great Lakes is steadily increasing, says Eugene F. Chamberlain, Commissioner of Navigation, in a statement in connection with his report for the last six months. The report shows that of the thirty-eight vessels, each over 1,000 tons, fourteen steel steamers, aggregating 52,310 tons, were built on the Great Lakes.

The Elder-Dempster Steamship Co. has contracted with the Dominion Coal Co. to carry coal to ports in Italy for an indefinite period. The Dominion Coal Co. has sold a large quantity of coal in Italy, and indications point to a permanent market for Cape Breton coal in that country.

It is now a settled fact that the efforts of the Lake Carriers' Association and vesselmen in general to have Col. Lydecker retained as United States Engineer in this district will be of no avail and that he will leave Detroit to relieve Maj. Eixby and Lieut. Col. Handbury at Cincinnati.

The Standard Oil Co. ordered two large iron ore barges, the Liberty and the Loyalty, from Cleveland through the lakes, the Canadian canals and the St. Lawrence to New York, whence they have been sent to the Cramp yards in Philadelphia to be converted into tank barges for carrying fuel petroleum from the Beaumont oil fields of Texas.

The Anchor Line Co., Buffalo, remembered its captains and mates handsomely Christmas. The captains received \$100 and the first mates, checks for \$50 each. Among the Ogdensburg men sharing in the gifts were Captains John McAvoy, Hugh Miller and Charles Nelson and first mate Thomas Bell.

H. W. McCormick and others, of Bay City, have sold the steel steamer Katahdin to the Export Lumber Co., of New York, for about \$115,000. The Katahdin has been operated on the Atlantic coast trade for the past three years in the coal trade. She will carry lumber from Georgetown to New York. F. W. Wheeler & Co. built the Katahdin at West Bay City in 1895. She has a keel length of 239 feet, 38 feet beam and 14 feet hold. Her gross measurement is 1,380 tons.

January 15. Senator McMillan has made an effort to have the War Department change its plans as far as Col. Lydecker is concerned, but received no encouragement, the War Department announcing that the change was for the good of the service, and would have to stand. Col. Lydecker, who has been confined to his home for two weeks, is having his office fixtures packed up, and said that although he appreciated the effort in his behalf, he realized that it would be useless.

A new life-saving station will be built at the mouth of the canal next spring, says the Marquette Mining Journal. This statement was given out by Capt. McCormack of the life-saving crew. It is to be one of the most up to date and best equipped stations on the chain of lakes and work on the structure will be commenced early in the year. Not only that but a new life-boat will also be sent to the local station and some new apparatus as well. The boat will be of the latest improved pattern and capable of withstanding the heaviest sea.

Capt. W. W. Brown, manager of the United States Transportation Co., has selected names for the five steel steamers building for that company by the American Ship Building Co. The steamers A. G. Brower, H. S. Wilkinson and W. W. Braun, are building at South Chicago. The steamer Nottingham will be launched at Buffalo in a few weeks and the steamer L. C. Smith will be turned out at Bay City. The capacity of the boats ranges from 4,800 to 6,200 tons on eighteen feet.

Captain Wolvin, of Duluth, and Captain Smith, of Buffalo, on Friday last had a conference with the Quebec Harbor Commissioners, as the result of which the latter granted to a syndicate organized by Captain Wolvin, a site

for an elevator on the Louise embankment, and also a site on the cross wall leading to the embankment for shed accommodation. The estimated cost is \$1,000,000. One year is given for getting the plant in working order.

An invention has just been completed by Prof. C. E. Anthony, San Diego, Cal., by which the immense kelp beds of the ocean are to be utilized in the manufacture of paper. The invention consists of taking the seaweed and forming it into a pulp, from which paper of the finest quality can be manufactured equal even to the finest linen paper, which, though a product of the chemist's laboratory, it greatly resembles. Not only has Prof. Anthony succeeded in making a suitable paper pulp from kelp, but he declares that the pulp can be produced at 50 per cent. of the cost of other pulp.

Collision.—Passing Steamers on Great Lakes.—Rule Governing Navigation in Fog.—The steamer Florida, passing down Lake Huron in a dense fog, at a speed of not less than six miles by the testimony of her own witnesses, first heard a passing signal of two whistles from a vessel almost directly ahead, and not over half a mile distant. She answered with the same signal, and starboarded her helm, but kept her speed. A minute later she saw the other steamer two lengths away and on a course crossing her own, and she then increased to full speed in an attempt to cross ahead, but a collision occurred, in which she was at once sunk. Held, that she was in fault in respect to her speed, in violating Rule 15 of the rules governing the navigation of the Great Lakes (28 Stat. 645), which provides that "a steam vessel hearing, nor more than four points from right ahead, the fog signal of another vessel, shall at once reduce her speed to bare steerageway and navigate with caution until the vessels shall have passed each other," and because prudent and cautious navigation required her, under the circumstances, on hearing the signal so near, to at once stop and reverse until the position and course of the other vessel could be ascertained with certainty, and she was not justified upon the apparent hearing of a single passing signal in neglecting such precautions. The George W. Roby, III Fed. Rep. (U. S.) 601.

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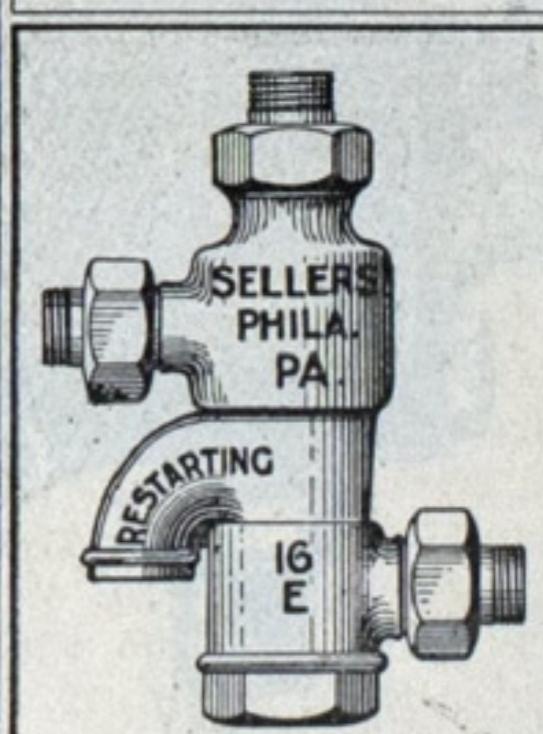
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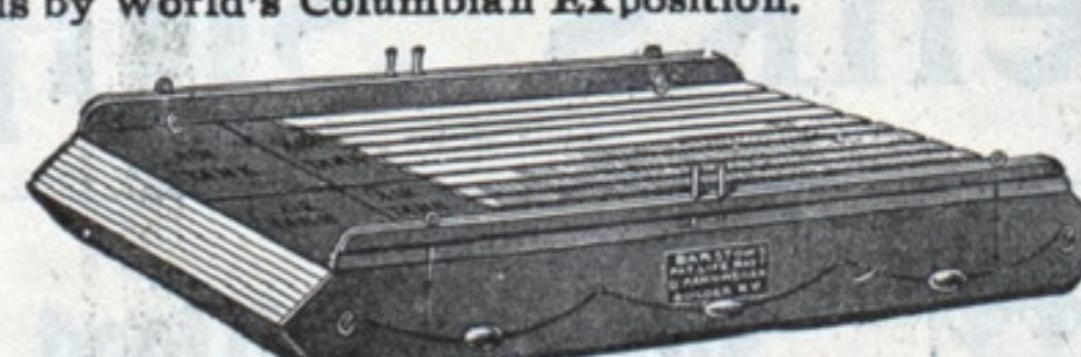
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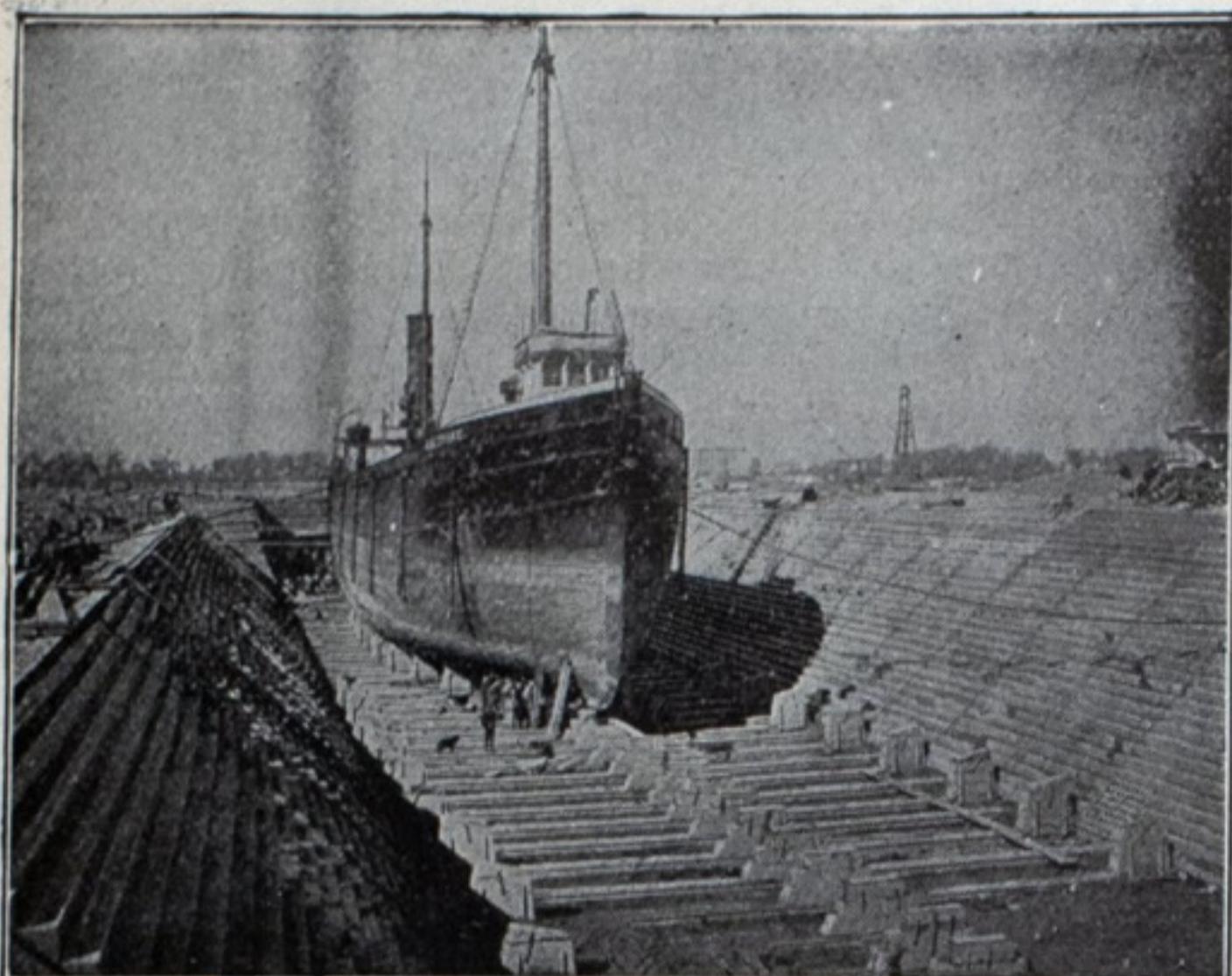
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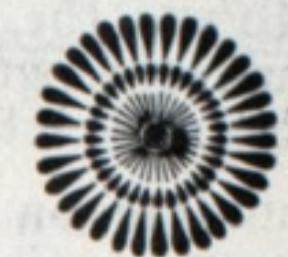
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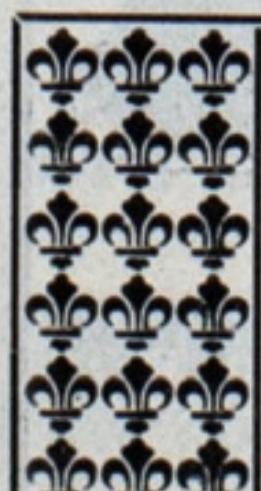
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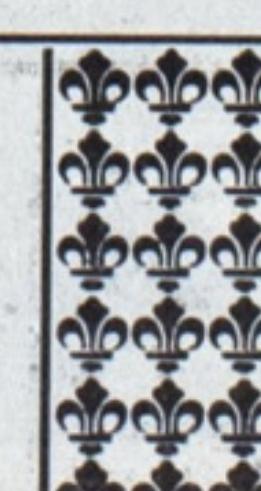
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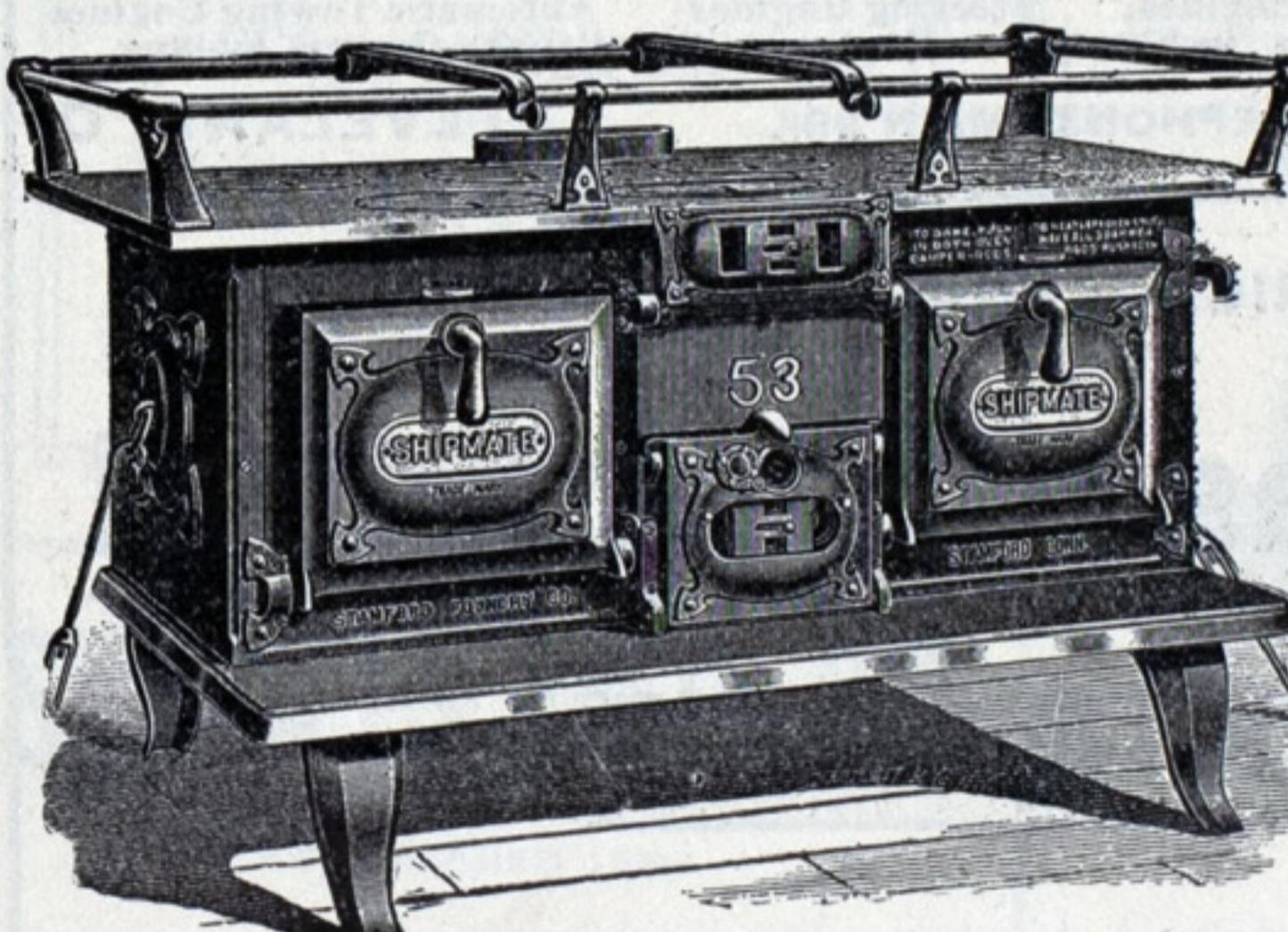
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